The Builder.

VOL. LXXI. No. 2808. NOVEMBER 28, 1896.

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Architecture of Italy in the Dark Ages.

CATTANEO'S great work on the "Architecture of Italy from the Sixth to the Eleventh Century," which was translated into French six years ago, in the fullness of time has reached an English version.* The tardiness of its arrival is but too significant of the backwardness of archæological research in our country. No less significant is the list of authorities which the author thinks it worth while to take into serious account. It includes the names of four Italian works—those of Cordero, Ricci, Selvatico, Gerrucci; three in French—Hübsch, De Dartein, and De Fleury; one German—Mothes; but not a single English name. The book does what so many books profess to do; it satisfies a want. It fills up a lacuna—or, as the translator prefers to call it, a lagoon—in the architectural history of Western Europe. Gothic we know; something of Romanesque; a little of Byzantine. But what happened between the Byzantine architecture of the palmy days of Justinian and the Lombardic Romanesque of the eleventh century, out of which sprang such vigorous offshoots in Germany and Normandy, no one knew. At this point the chain of continuity in the history of architecture was broken. There were early Christian churches of the fourth century, and here and there a later one at Rome; there was the famous group of early sixth century churches at Ravenna. The historian passed on with perfect sangfroid to St. Michael, Pavia, and St. Ambrose, Milan; in one gigantic leap from the sixth to the eleventh or twelfth century. That is to say, this is what the careful and accurate historian did. But nature abhors a void; and so does the antiquarian. More often, then, by antedating a church here or there by two or three centuries, a sort of series of stepping-stones was set up, which, starting in the marshes of Ravenna, landed the historian in the plains of Lombardy. It simplified matters very much when Torcello, in its lonely lagoon, was assigned to the seventh century; and St. Ambrose to the ninth. Meanwhile, the student of the monuments was befogged. His architectural instinct was outraged when he was told that the work of the nave and atrium of St. Ambrose was done in the ninth century, when almost every detail of it could be paralleled in the twelfth century work of Normandy, England, and Germany. And if the origins of Romanesque were thrown into darkness and confusion, it fared even worse with Byzantine work.

Cattaneo's book was certainly needed. It has a double value, negative and positive. Negative, because it dispels error; *e.g.*, the date of most of the Romanesque work at Pavia and Milan and elsewhere in Lombardy is pushed forward two or three centuries; the nave of Torcello Cathedral is transferred from the seventh to the eleventh century. And this is probably the main value of the book. It is most valuable on the destructive side. Indeed, the author has been, if anything, rather too anxious to destroy the work of others. Still, that was the first thing to do. The ground had to be cleared. The positive side of the work is much less insisted on. It is somewhat difficult to gather from it what was actually done in the five centuries of architectural darkness. However, two conclusions seem to emerge. One is that whatever was done was certainly not what is known as Romanesque work; at any rate, before the ninth century, and then only in very piecemeal fashion. To us this question—the origin of Romanesque, and so of our Norman and Gothic architecture—possesses peculiar interest. But it was the author's intention to discuss this in a separate work; in the book before us, therefore, it receives but scanty notice. The other conclusion is that all the work done in the five dark centuries is full of Byzantine influence. In other words, Early Christian architecture is not derived from Rome directly, but only indirectly, by the roundabout route of Byzantium and Ravenna.

Nor will this conclusion surprise the student of history. The importance of Rome in early Church history has been vastly overrated; not less has its influence over Mediæval architecture. Even in the days of Constantine—at the beginning of the fourth century—Roman architecture was in a state of decline and decay. It is significant of the state of things in Rome at that day when one finds that to decorate the arch of Constantine it was necessary to strip the earlier arch of Trajan. Then came onslaughts of the hordes of barbarians from the North and East, directed one after another at the wealth of the Imperial city. Rome, indeed, soon ceased to be the Imperial city, even of half the Empire. Nor was it long before she ceased to be the capital of Italy. Italy, in the sixth century, was dismembered; was partitioned like Poland in modern days. Italy ceased to be more than a geographical expression. And in the city of Rome architecture also was well-nigh futile for twelve centuries. Not till the Florentine Renaissance architects, having no more work to do at home, transferred themselves to Rome in the sixteenth century, was Rome a predominant factor in the history of art.

With Byzantium it was otherwise. Long, under the influence of Gibbon, we have depreciated and underrated the Byzantine Empire. A later school—Findlay, Bury, and Oman—tell us a very different story. Byzantium produced many a statesman, many a general, many great artists, in the history of its thousand years. How few realise that while we Northerners were developing our Romanesque and perfecting Gothic, and even till the last days of Gothic architecture, Byzantium and the Byzantine Empire were still standing; that it was not till the reign of our Henry VII. that there fell at last the great Roman Empire of the East, for ten centuries the bulwark of Christendom and Europe against the Saracen, the abiding home and refuge of literature, science, and art. It was not, then, from a decaying and decayed Rome, so much as from the architecture of Eastern Rome, Constantine's "New Rome," that Mediæval architecture derived its growth in Western Europe. That is the main lesson reiterated and enforced by the researches of Cattaneo. From the sixth to the ninth century he finds Byzantine influence everywhere.

Here again history steps in to our aid. From 493 to 552 A.D. the capital of the Gothic dynasty, especially of the great king, Theodoric, was Ravenna. Theodoric had been brought up in the Byzantine, *i.e.*, the East Roman, Court, and was profoundly convinced of the value and superiority of Byzantine culture. Art and architecture, artists and masons, he imported from Byzantium. His capital, Ravenna, was Byzantine. And when the Gothic dynasty came to an end,

* "Architecture in Italy from the Sixth to the Eleventh Century," by Raffaele Cattaneo. Translated by the Contessa Isabel Curtis. Cholmeley in Bermani. Fisher Unwin. 1896.

Fig. 1.—Capital of the Galleries of S. Lorenzo, Rome: A.D. 578-590.

Fig. 4.—Archivolt of the Baptistry at Cividale: A.D. 737.

much of Italy became definitely a constituent part of the Eastern Roman Empire. Ravenna and much of northern Italy, most of the south of Italy and Sicily, became and long remained provinces of the Byzantine emperor. Ravenna itself was the capital of the Byzantine exarchy of Northern Italy for exactly two centuries, from 552 to 752 A.D. Thus, during the darkest ages of Italy, when Rome was but a cathedral city of a provincial bishop, there was in Ravenna and its exarchy a powerful outpost of Byzantine art. No wonder that when the Lombard barbarians at last settled down to the arts of peace it was the work of the neighbouring Byzantine province, and not that of poor, remote, decayed Rome, that they set themselves to copy and to emulate. And be it noted that it was just during the two centuries of the existence of the Byzantine exarchy at Ravenna that the Lombardy domination lasted. The two periods are almost exactly synchronous. The Ravenna exarchy lasted from 552 to 752 A.D.; the Lombard Domination from 568 to 773 A.D. when Charlemagne conquered Lombardy,' and was crowned King of Lombardy with the Iron Crown.

Here again history gives some light. The buildings of the Lombard style, the earliest work in Romanesque, have constantly been ascribed to the time of the Lombard domination; roughly to the seventh and eighth centuries. It is true that the Lombardic version of Romanesque first came into existence in Lombardy. But it is quite impossible that it should have arisen there in the time of the Lombard domination, much more that it should have sprung up spontaneously in the savage breasts of the Lombard invaders, or have been brought with them from the primeval forests of Germany, as certain German Chauvinists do vainly boast. It takes at least two centuries to civilise a savage race, as the history of all missionary effort shows. It is impossible that these barbarous Germans should have been evolving a new architectural style in the seventh and eighth centuries. They had other work to do; to harry, and slay, and destroy, first the natives, then one another. One does not find the Saxons in England, or the Northmen in Normandy, become builders till *after* the first two centuries of their sojourn in England and Normandy respectively. The conclusion of the whole matter is, then, that up to the ninth century the architecture of Northern Italy is in reality almost wholly Byzantine; that the Romanesque architecture of Lombardy did not commence till the Lombard tribes had been two or three centuries in the country; and that when it did commence it was in the main an attempt to work on Byzantine models, only diverging at first so far as it was driven by constructional exigencies, such as the drying up of the supply of antique columns, capitals, and bases; or by poverty of imagination or idea; or by inability and clumsiness in execution.

To all this, one large reservation has to be made. Two types of plan were to be found in Byzantine churches: the one, the more common and the more magnificent, the Domical, which culminated in the patriarchal cathedral of Santa Sophia as early as 538 A.D.; and the other, far more humble, the wooden-roofed Basilican building, with nave and aisles separated by classical columns. Of the former, the Italians had a glorious specimen in S. Vitale, Ravenna, commenced only three years after the completion of Santa Sophia. This type they copied here and there, sporadically, but chiefly in little baptisteries, such as that of Biella. But use it in large churches they dare not. Having stolen or conveyed a sufficient number of antique columns with their appurtenances, it was not so very difficult, by the aid of a few tree-trunks, to roof in an oblong enclosure. It was a very different thing to construct a wide dome of masonry high up in the air with thrusts not to be understood. So S. Vitale was not imitated, at any rate in a large way, till the age of Charlemagne, when that great emperor raised the dome of Aix-la-Chapelle, beneath which he lies. It is curious all the same. Everybody seems to have known how to build a semi-dome. All over the world apses were vaulted in semi-domes. Why did the builders not go on to stick two semi-domes together? They did not. What a difference it would have made to our Norman and still more to our Gothic architecture if the semi-domes of the apses had blossomed into domes!

The other type of Byzantine church was Basilican; a form of planning which, whether it originated in the "schola," the secular Basilica, or the arrangements of the Roman mansions, was common to the whole Roman world, east and west alike, and by no means confined to the ancient capital of the west. But though there is nothing specially Byzantine about the plan, the details—and it is in respect of these that Cattaneo's work is of the greatest value—are almost wholly Byzantine in character. Indeed, wherever one goes in Italy, if one comes across a building of really early date, especially a crypt, the carved capitals almost invariably resolve themselves into three classes: antique Roman capitals, executed in one of the three first centuries of our era; antique Byzantine capitals of the sixth century (fig. 1); and lastly, clumsy native imitations of the latter. The trace of Byzantium is over all the native work.

By the aid of the sculptured capitals, choir screens, ambos, ciboria, and the like, the author is able to divide the architecture of Italy between the sixth and the eleventh century into various periods. What these periods are, however, it is rather difficult to make out. From the titles of the chapters they would seem to be Latin-Barbarian, Byzantine-Barbarian, and Italian-Byzantine. But we also hear of a Proto-Byzantine, which is different from all three; of a Neo-Byzantine, which again is different; and of Lombard-Romanesque, which differs from them all. It will, perhaps, be more intelligible if we re-arrange the subject as follows:—First, Byzantine proper, or, as the author styles it, Proto-Byzantine; Byzantine as it is seen in its own country and the Byzantine provinces; that wonderful style which, through

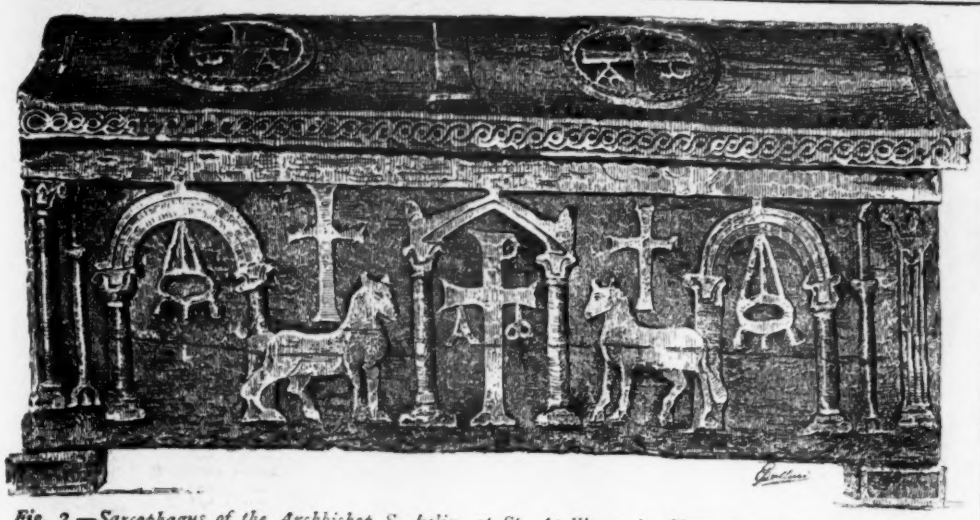


Fig. 2.—Sarcophagus of the Archbishop S. Felix, at St. Apollinare in Classe, near Ravenna: A.D. 725.

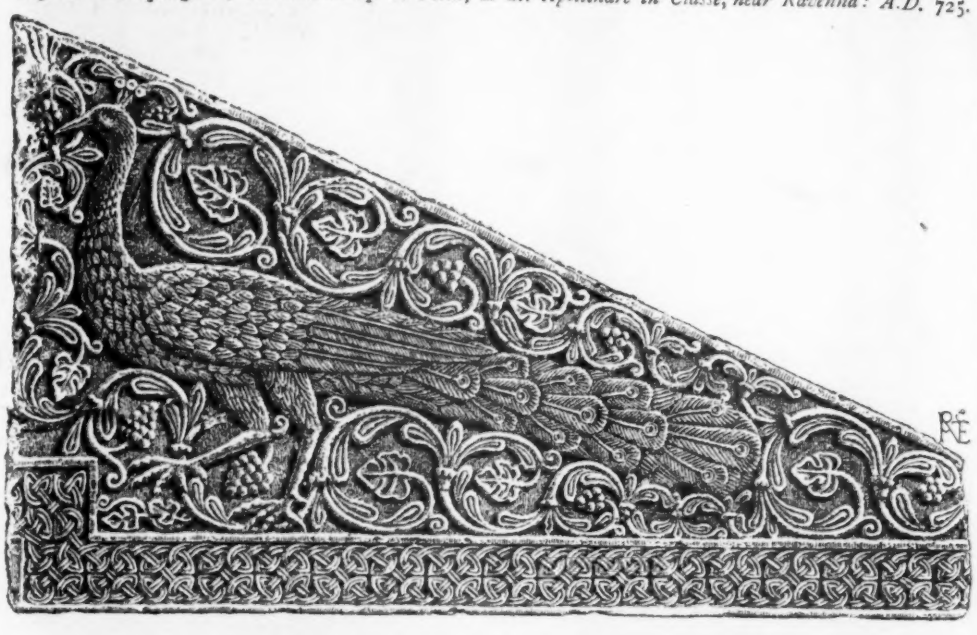


Fig. 3.—Fragment, possibly belonging to the Ambo of St. Saviour, Brescia: eighth century.

ancestors unknown, suddenly culminated, early in the sixth century, in Santa Sophia and San Vitale; buildings for which, in constructional skill and artistic effect, no parallel can be found before the Gothic cathedrals arose in the thirteenth century. On this, one of the great world-styles, the book has yet to be written. Chapters scattered haphazard in Mr. Fergusson's "History of Architecture;" the illustrated volumes, now ancient, of Messrs. Texier and Pullan; Salzenburg's illustrations of Santa Sophia; and the information dispersed in Messrs. Lethaby and Swainson's monograph, represent the greater part of what is accessible to English students. All the more need to study sixth-century Byzantine at first hand; if not in Constantinople, then in Ravenna. Knowledge of all this the author takes for granted. Unless, however, the reader is saturated with the work of S. Vitale, S. Apollinare in Classe, S. Apollinare Nuovo, the two Baptisteries, and the rest of the Proto-Byzantine work in Ravenna, much of the force and weight of the author's arguments will be lost to him. He can afford to neglect Rome; let him start at Ravenna and work through Grado and Torcello to Brescia and Milan, and he will be following the natural order of things, and indeed the very route which was taken by Byzantine art in its slow progress westward.

That being understood, we may pass on to the first period treated of by Cattaneo. It is Byzantine art in the seventh century; what he calls Byzantine-Barbarian (c. 560-730 A.D.). As we have seen, the architecture of Ravenna found its supremest expression in the glorious church of S. Vitale. This was commenced 541 A.D., and rapidly completed. Now it is a remarkable fact that even at Ravenna, then the centre of the Italian civilisation and culture, not a single building was erected at the end of the sixth or during the seventh or eighth centuries. The torch of civilisation was suddenly quenched. What was going on in North Italy is told by the author in an eloquent introduction. In 566 there was a frightful pestilence; in 568 the great invasion of the Lombards, who came to stay; in 569, famine; in 580, rinderpest and smallpox; in 589, Verona, Theodoric's favourite city, was half destroyed by a deluge, and the remainder by fire; three successive pestilences, famine, alternations of icy cold and scorching heat, the devastations of mice and locusts, signalised the closing years of the sixth century. Add to these the breaches of the embankments of the Adige, flooding for two centuries all the fertile country from the Euganean hills to the Old Po, and surrounding Ravenna with the marshes and malaria which were to be deadly fortifications for centuries against all attacks by land. Moreover, the Byzantine Emperors were either too poor, or (what was as bad) too avaricious, to do anything for their Italian provinces in those centuries. No wonder that, under such a concatenation of catastrophes, Byzantine art and Roman art alike plunged almost in a moment into the lowest depths of degradation. Here and there, it is true, as in the capitals of the Byzantine galleries of S. Lorenzo and S. Agnese, Rome—capitals which may well have been bought out of the "shop" at Constantinople—the Byzantine hand retains its cunning. These are exceptional. The characteristic work of the period is of the basest possible. Take the sarcophagus of St. Felix in S. Apollinare in Classe; he died about 725 A.D. (fig. 2). Look at its fluted pilaster, the lighted candles, the hanging crown, the horsey-looking sheep. Or the ambo of the church of St. John and St. Paul at Ravenna, A.D. 597, with the stag only distinguishable from the lamb by having antlers; while the peacock, but for its tuft, might be mistaken for the dove. Mark also the two horrible caricatures of the human figure.

Then comes a very interesting period, about which opinion is likely to be divided. It lasted for little more than half a century, from about 730 to 780 A.D. If we may follow the author implicitly, it is a transient, but brilliant, recrudescence of Byzantine art in Italy; in fact, it is a Byzantine Renaissance. The author seems to have no name for the period, though he takes great trouble to differentiate it. It might be styled the "Early Byzantine Renaissance," or the "Eighth Century Renaissance." The quality of this work is so very far above that of either the preceding or the following period, and so similar in character to the Hellenistic work of Syria and Greece, that the author concludes that it could none of it have been the product of native chisels, but of Hellenistic artists driven out of Syria by the Mahommedan invasions, or thrown out of employment by the great iconoclastic controversy which raged in Byzantium in the eighth century, and made and unmade emperors. It is found all over the peninsula alike, except at Ravenna, which was over-churched. This work, be it Hellenistic or not, disappeared as suddenly as it had begun, about 780 A.D. The masterpieces of the period are the glorious peacocks of Brescia (fig. 3): a startling change, indeed, from the fowl on the Ravenna ambo. With Cattaneo, "We salute the artist." If the reader takes an interest in peacocks—and any one who sees much of Byzantine work will see very many peacocks, and may as well get up an interest in them—he may draw up an order of merit. At the bottom comes the peacock of the Ravenna ambo. Then the amiable pair on the perforated choir-screen of S. Vitale. Then the haughty birds in the frieze of the ivory throne of S. Maximian, Ravenna. Then the bird of Brescia. Then the peacocks of Torcello, which form the frontispiece to the English translation of Cattaneo's book, standing on tip-toe, with neck and tail feathers arched in naturalistic curve, A.D. 1008. Then the peacocks of the Cathedral of Ancona, the date of which is unknown. The peacock was sacred to Juno and to Roman empresses; when they died, it was carved on their tombs and on funeral lamps; thus it became the symbol of their apotheosis; while to the early Christian mind it was associated with a somewhat

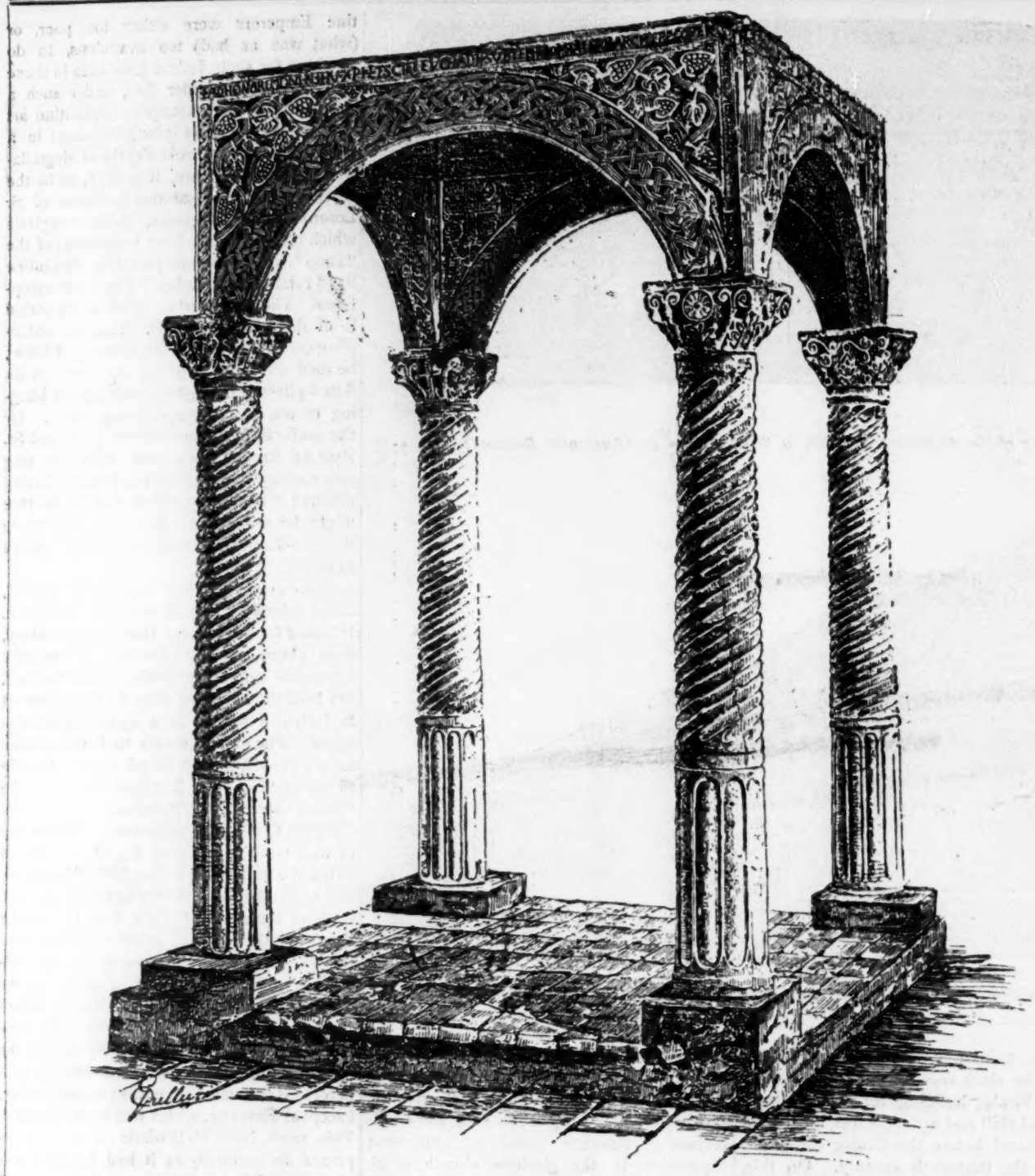


Fig 5.—Ciborium of S. Elucadius, S. Apollinare in Classe: A.D. 806-816.

similar symbolism founded on various superstitious beliefs.

This, the Hellenistic art of the eighth century, is represented by much fine work, especially in the flat; the capitals are less successful. One of the most important is the Baptistry of Calixtus at Cividale; erected, as the inscription records, in the reign of Luitprand, c. 737. What is perhaps of most interest to us is, that while the ornament, which is very profuse and varied, is more or less of Hellenistic or of Classical type, and generally of graceful design and careful execution, there now appear in great numbers characteristic interlacings; moreover, new animals, non-symbolical, occur; not merely the peacock, the lion, the eagle, the dove, and the rest of the menagerie of Byzantine sacred art. But where did the Hellenistic artists get them; the winged griffins, the two lions about to bite the two rabbits or hares, and the two big fish about to swallow the two little ones? (fig. 4). In these and the like, one sees plainly the beginnings of the bewildering wealth of animal sculpture in the Lombardic and Norman architecture of the eleventh and twelfth centuries.

Next comes the so-called Italian Byzantine art of the ninth century, from about 780 to 900 A.D., work which is found all over the peninsula, but most of all in Lombardy. The Lombards and others had now been long settled in the country, and, like the Northmen and the Anglo-Saxons, set to work to build for themselves. They had tried and failed in the sixth and seventh centuries; they had got Hellenistic tutors in the eighth century; in the ninth they felt able to stand alone. The great variety of Hellenistic ornament in use during the last period was beyond them; they confined themselves to a few motifs, which they repeated even to monotony. The human figure they could not manage, and they very rarely tried. Like the children they were, they could draw but caricatures of animals; so they elevated the grotesque into fine art. Above all things, they gave themselves up to "curvilinear and mixtilinear braidings," by which the translator probably means interlacings. Most of all, they produced "palms, crosses, rayed and girandoled roses, leafy spirals, beads, and rampant caulicoles' (whatever these may be). A favourable specimen of ninth-century work is the ciborium of Elucadius (fig. 5), which has been moved into a corner of the Church of S. Apollinare in Classe, Ravenna. According to the inscription, it was sculptured between 806 and 816 A.D.

At this point our author's classification becomes a little confusing. The fact is that early in the same ninth century, some forty years from the beginning of the Italo-Byzantine style, one important district broke away. This was Lombardy. Lombardy began to work out for itself a new style, which the translator calls Romanic,

but which is usually known as Romanesque. The rest of Italy went on building churches, chiefly Basilican in type, with Byzantine detail. For an account of this, the true Lombardic period, commencing early in the ninth, and perfected in the Romanesque of the tenth, eleventh, and twelfth centuries, we must refer readers to the book; limits of space forbid us to treat it here. It is, however, a very important part of the volume.

Finally comes in another bifurcation, again to upset the classification of the author, with whom arrangement and nomenclature do not seem to have been strong points. At the end of the tenth century, while Lombardy was well on the way in its development of Romanesque, and while the rest of Italy was still engaged on Italian-Byzantine, Venice and the towns of the Lagunes suddenly harked back to Byzantine pure and simple — the Byzantine of the sixth century. In other words there was a Renaissance. We had, as already observed, an Early Byzantine Renaissance before in Italy, between 730 and 780 A.D. This is a later and much more important one. It is what the author calls the Neo-Byzantine period, a name to which we may as well adhere. It is the period which produced St. Mark's, Venice, and, as the author demonstrates, the greater part of the Cathedral of Torcello and the neighbouring Church of S. Fosca. For the Neo-Byzantine work of St. Mark's, Cattaneo refers us to that wonderful monument to the generosity and patriotism of the Venetian publisher, Ongania, the author's own monograph on St. Mark's.

To this period also belong the beautiful churches of the Theotokos, Constantinople, and the Apostles' Church, Salonica; and the peacock and lion slabs of the chancel screens of Torcello.

Space does not allow us to go into the chronology of the numerous buildings discussed by the author. One knows the type of antiquary to whom Norman work is Saxon and Saxon Roman. Suffice it to say that Cattaneo was an antiquary of the opposite type. In most cases he has put the clock forward a couple of centuries or so. And therein his chronology will meet with much opposition. The principal monuments assigned by him to the seventh century or "Byzantine-Barbarian" period (c. 560 to 730) are Grado Cathedral and the Church of St. Mary; St. Saviour, Spoleto; the galleries of St. Lorenzo, Rome, (sixth century) and those of St. Agnes (seventh century). To the eighth century "Byzantine - Renaissance" (c. 730-780) belongs St. Saviour, Brescia, an early Christian church of the very highest importance, which is not so much as mentioned in Mr. Hare's "Cities of Northern Italy." To the ninth century or "Italian-Byzantine" period (780-900) belong at Rome, St. Maria in Cosmedin, St. Praxede, S. Maria in Domnica; and the side apses and west front of Torcello Cathedral. To the "Early Romanesque of Lombardy" (ninth and tenth centuries) belong, in Milan, the apse and choir of St. Ambrose, the campanile of St. Satiro, St. Vincent-in-Prato (a most important example), and the apses of St. Eustace, St. Celso, and St. Calimero; also the church and baptistry of Alliata (ninth century), and in the tenth century the nave of St. Eustace, Milan; SS. Felix and Fortunatus, Vicenza; St. Stephen, Verona; and St. Sophia, Padua; the two latter of which, however, both appear to us to be of earlier date. Finally, to the "Neo-Byzantine" period (978-1070) belong St. Mark's, Venice, the nave of Torcello, and Caorle Cathedral.

The book is full of *obiter dicta* on the chronology of the raised choirs, the transeptal plan, triple eastern apses, the history of the pier, the corbel-table, the gallery, the sacristies, and the like, from which we are unable to quote. One remark we must make. It is to regret the polemical and virulent tone of the whole book, in respect of which, unfortunately, it is not at all exceptional in Italian archæological literature. This not only disfigures the form of the book, but plainly has warped the whole drift of the argument. Instead of setting out with a preliminary sketch to put the whole subject in proper historical perspective, the author commences with an "appreciation" of his predecessors, which reminds one of the days of the Dunciad. Ricci is extremely superficial; Hübsch was incapable of throwing the least light on the artistic history of the barbarous ages; while De Dartein retained all their confusion and darkness. Mothes invents monuments that do not exist, creates ideal ruins, and widens, lengthens, and complicates churches at will! But the worst is reserved for his fellow-citizen, Selvatico, whom he abuses not only for what he did say, but for what he might have said, but did not. The book is undoubtedly, however, in spite of its controversial tone, one of the weightiest contributions recently made to the history of architecture, especially as to the reality, permanence, and importance of the influence of Byzantine art, and as to the origin of the Romanesque architecture of Lombardy. It is well printed, and illustrated with 169 engravings, most of them original. No archæologist can afford to pass over this important addition to our knowledge of what are emphatically the Dark Ages in the history of architectural art.

NOTES.

The London County Council Scandal.

THE discussion of the Works Committee scandal at the meeting of the County Council on Tuesday ended in the appointment of a pretty strong committee of inquiry into the management and financial position of the Works Department, and it will be most suitable to postpone further comment on the matter until this Committee has presented its report. Mr. Costelloe's amendment, proposing the addition of a clause directing the Special Committee to compare the cost of work done by direct employment with that done by contractors, was an obvious red herring drawn across the path, as its adoption would have pledged the Committee to go indefinitely into subjects far beyond the scope of inquiry it was appointed for, and the fact that there was only a majority of fifty-six *v.* fifty-one against it, seems to indicate that a large proportion of the members of the Council are still blind, wilfully or otherwise, to the real nature of the questions which need clearing up; and Mr. Costelloe's indignation at the suggestion that some influence was behind the officials who transgressed is absurd. What else can people be expected to think? What we said on this point last week is, we observe, repeated in almost the same sense in the *Times* leader on Wednesday; that foremen and clerks combined to tamper with books without encouragement from some person in authority "is an idea which unbiased common sense refuses to entertain." But that is just what a number of members of the County Council apparently cannot perceive.

The London Municipal Society.

THERE is no doubt that a Society of this character can do very good work in London merely as a critical body. It can, however, do more than this. It can concentrate public attention on a constructive municipal policy. It is obvious from what occurred at the annual meeting this week that the chief work of the Society in this direction will be the formation of some definitely defined municipalities in London which will take over the work at present done by Vestries and District Boards. As we have often pointed out, the abnormal size of London makes the experience of provincial towns in regard to municipalities of very little use in reference to London. That is the cardinal mistake of many members of the London County Council; they fancy that what is suitable for Liverpool is suitable for London. The more these municipal questions are pressed on the attention of the people of the Metropolis by the Society the better it will be for the well-being of the capital.

An Architect Attaché at the German Embassy.

WE have frequently commented on the fact that while the German Government provides "technical" attachés for the embassies at Washington, Paris, St. Petersburg, and other important capitals, London has not for a long time been provided with an architect or engineer whose duty it is to report on the progress we make and advise the home authorities on the improvements they might adopt. We are glad, therefore, to hear of the appointment of a well-known German architect, Herr Muthesius, who will probably fill the post better than some previous "technical" attachés at the German Embassy, who have shown either apathy or a decided bias against the work done in this country; and it is not surprising that they did not find much encouragement in their study of English work. There is no doubt, however, that an able foreign architect will always be met with the greatest courtesy, and may be sure of the most hospitable reception here; and we have every reason to believe that the present appointment of Herr Muthesius will be a success.

M. Magne's Drawings in Greece.

IN the Museum of architectural sculpture at the Trocadéro, Paris, are exhibited the sketches and studies which M. Lucien Magne, the architect, has recently made in Greece, more especially in relation to the Parthenon. M. Magne was commissioned by the Hellenic Government to study the question of the reparations required to the Parthenon, and has produced an excellent set of plans and water colour drawings showing the condition of every portion of the Parthenon. There are also a considerable number of photographs and sketches taken at Delphi, at the Museum at Athens, and at Rome, Ravenna, and other places of interest.

Elementary Education.

THE importance of a sound elementary education as the basis of a superstructure of technical education is so evident that it is much to be regretted that those who are in

favour of further governmental aid to voluntary schools are so much at variance in regard to the nature of that aid and of its distribution. The ordinary Englishman wishes to see a sound secular education given to every child; he is equally desirous that the religious and moral training of children should not be neglected. But the squabbles of clerics upon the nature of State aid are apt to make the cool-headed and sensible man of business wish that the clergy of every denomination had nothing to do with elementary education. Amidst the dissensions of the clerical supporters of voluntary schools, and the open hostility of Nonconformists to them, there is danger lest an important part of the existing system of elementary education may be seriously injured before another system has been created to take its place.

Landlords and Sanitation.

THE case of Bazzone *v.* Notley, which was tried this week, differs in many respects from the ordinary action by a tenant against a landlord for misrepresentation in regard to the sanitary state of a house. The tenant here undoubtedly obtained a clear warranty from the landlord as to the drainage, and he on his part gave it in good faith. Nor was he altogether unjustified in so doing. He had put a new form of drain, "the Norman-Shaw," into his house in 1891; the previous tenant, up to 1895, had found no fault with it. It was not, therefore, the case of an ignorant man carelessly declaring that the drainage was good when it was really wholly insufficient. There was justification for the landlord's statement. As it turned out, however, the system was imperfect, at any rate during a hard winter, and the plaintiff obtained damages accordingly. The decision of the jury appears to show a tendency in the public to make landlords liable for all imperfections in the sanitary condition of houses, even when they have apparently acted in good faith and with some justification. No doubt the tendency is a wholesome one.

Dangers in Railway Working.

THE Amalgamated Society of Railway Servants have been drawing attention to a matter we have before alluded to in commenting upon preventable causes of railway accidents. In the course of an interview with the President of the Board of Trade last week, their representative stated that waggons are still being used with a brake on one side only—a fruitful source of danger both to the traffic and the shunters. In some cases the absence of the brake may render the pulling-up of a waggon or a string of waggons simply an impossibility; while in others the operation may be possible, but only at a great risk to the shunter. In a smaller degree the labelling of waggons on one side only constitutes a similar risk; although on the face of it this may appear a trifling matter. When a guard or a shunter, in marshalling his waggons, comes across one without a label, he is compelled to make a dive under the trucks, or lose valuable time in getting to the other side in a safer manner. Whatever may be urged on the score of expense in regard to improved couplings and providing brakes on each side of waggons, there can be no such excuse for the continuance of the other objectionable practice referred to. Mr. Ritchie entirely agreed with the request of the railway men for reform in this direction, and it is surprising that it should be necessary to bring such a matter before a State Department.

Electric Demand Indicators.

NUMEROUS attempts to treat all consumers of the electric light on a constant-profit basis are being made all over the country. Many Borough electrical engineers have elaborated sliding scale systems of charging, and introduced them suddenly to their customers. Naturally there is some discontent; large shopkeepers who close early fail to see why their humbler neighbours who keep late hours should be charged so much less per unit. To electricians it is an obvious axiom that the cost of the supply is proportional to the greatest number of lamps ever used, and inversely proportional to the number of units consumed per lamp, and they are surprised at the difficulty they experience in convincing the public that their mathematical sliding scales are equitable. So annoyed are some Borough engineers over the denseness of the public that they advertise lectures for their customers, in which they will explain the sweet simplicity of their sliding scale. We sympathise with their difficulties, especially when they come to explain the beauties of the monstrous air thermometer which is to indicate the maximum demand. Mr. Arthur Wright's new demand-indicator is a great improvement on his last, but is it not rather absurd that consumers are compelled to have virtually two meters in their houses when one ought to be sufficient? Is electric invention at such a low ebb that a great, ugly, expensive differential air themometer has to be placed beside the meter in order to measure the maximum current that has passed through it?

Bradford and Electricity.

BRADFORD is determined to make its mark on the history of electrical progress in this country. It was here that the first scheme of high-pressure for consumers was brought into operation, and recently the Corporation, following a course which we strongly recommended a few months ago, are providing free lamps to their customers. Of course, they must guarantee the candle-power, otherwise they will be on the same level as the shopkeepers whose business they are cutting into, and who, equally with the general public, are at the mercy of the thousand and one lamp-makers who advertise their lamps as the best. The bill for current alone for a thousand hour test of a 16 candle-power lamp is 30s. and as very little is to be learned about a class of lamp from a solitary test it is no wonder that the public are taken in. For this reason we welcome municipal lamps, and think that in providing them the Corporation is acting justly. Against the next probable move, free municipal wiring, there are, however, very grave objections. Another commendable practice they are introducing at Bradford is to lend out motors ($\frac{1}{2}$ to 6 horse-power) and as they charge 3$\frac{1}{2}$d. a unit or 2$\frac{1}{2}$d. per horse-power hour for motor current, these will be a great boon to many small manufacturers and shopkeepers.

Sanitary State of Bicester.

DR. THEODORE THOMSON'S Report to the Local Government Board on an outbreak of enteric fever in the Urban District of Bicester leads to the conclusion that, although there are complaints as to badly-constructed drains and a deficiency of water-closets, the main source of the mischief has lain in the water supply, which is mostly from shallow wells. In the first group of cases of twenty-eight persons attacked, no fewer than twenty-six derived their water supply from a spring known as the "Crockwell Spring," and three other groups of illnesses were connected with the drinking of water from three other wells. Crockwell Spring was found to have sewers leaking into it; another well, in Plough-terrace-yard, which mainly formed the water supply of the second group of cases, was a shallow dry-steined well, and within 4 ft. of it was a urinal attached to a public-house. Another well, which mainly supplied the third group of persons attacked, was shallow and dry-steined, and it was found that the yard drain, which passed within a few inches of it, was leaking freely and its contents visibly percolating into the well. This yard drain received water-closet sewage as well as sink and yard drainage. The Report naturally indicates a pure water supply as the most pressing need of Bicester.

Penny-in-the-Slot Electric Meters.

SEVERAL electricians have been recently perfecting these meters, although it is not easy to understand for whom they can be intended. We suppose that, seeing the tremendous success of penny-in-the-slot gas-meters, it is thought that these electric meters, combined with the promise of "free wiring," will induce small shopkeepers to adopt the electric light. The cost of the "free wiring" is to be defrayed by a slightly increased charge per unit. Messrs. Bastian & Hodge's apparatus can be fastened to an electric meter, then on putting a penny in the slot a weight inside can be wound up. The weight unwinds itself at a rate proportional to the number of revolutions of the meter spindle, and therefore to the amount of current used. Meters with this adjustment attached can be made very sensitive, as the weight helps to overcome the friction of the spindle. They are, therefore, well adapted to measure accurately the energy taken by even a single eight-candle-power lamp, and hence are in favour with supply companies.

Common-sense at a Competition.

THE discussion at the Sheffield School Board at their meeting on the 19th in regard to the competition for a proposed new Pupil Teachers' Centre building (the result of which is given in our Competitions column) exhibited a spirit of fairness and common-sense in regard to the position of the professional assessor in a competition which we do not always meet with. Mr. Esam, a member of the Board, observed that the assessor (Mr. Robson) "was called in to advise and not to select," but, he continued—

"There were overwhelming reasons which made the majority of the committee in this case fall in with the assessor's judgment. In anticipation of an amendment being proposed he said members of the Board should hesitate to put in preference to Mr. Robson's matured judgment their own personal considerations as to which design was the best."

An amendment was proposed and seconded to the effect that another design should be preferred to that placed first by the assessor, in which the Board were within their rights but the Chairman in summing up the discus-

sion said that while he could not recommend the Board to give up its responsibility in making a selection—

"At the same time he could not see his way to reject the advice of an expert except for very strong reasons indeed, and in this case he did not think Mr. Adams's arguments, strong as they were, were sufficient to induce him to depart from the usual course of accepting the recommendation of the assessor. If he had followed his likes and dislikes, he would have placed the plan which the assessor placed third in the first position. But then he recognised that he was not an expert, nor were any of the members experts."

This is such good common sense that we quote it for the example of other members of Competition committees. Ultimately the choice of the assessor was accepted by nine votes to six.

The Palais de l'Industrie, Paris.

THE demolition of the Palais de l'Industrie is to be commenced in January, but only a portion of the building will at present be taken down, and the remainder will be left available for the usual exhibition of the Salon, which will next year be seen for the last time in the galleries which it has occupied for so many years, and which, extensive as they are, it had almost outgrown.

Turner's House, Twickenham.

TURNER'S house at Twickenham is placed in the market. It was built for the painter himself, and after his own fancy, as Sandicombe Lodge; he occupied it (together with his father) on giving up his riverside house at West-end, Upper-mall, Hammersmith. About that time he changed his London residence from No. 64, Harley-street, where he had opened his Turner Gallery, to No. 47, Queen Anne-street West, which was afterwards renumbered, and was pulled down in 1882, the site being taken for new offices (now at No. 23) for the Portland Estate. Turner then gave up his house at Twickenham, taking lodgings in the house at the remoter end of Cheyne-walk, Chelsea.

Society of Painters in Water Colours.

THE exhibition of the Society of Painters in Water-Colours, of which the private view takes place to-day (Saturday), strikes us as hardly up to the usual standard, and there are things there, such as "The Maid of the Mill" (179) and others, which are little credit to the exhibition. But there are a certain number of contributors who can always be counted on. Mr. Albert Goodwin's "Twilight in the Red Sea" (42) is a fine study of effect of an unusual kind; his "Verona" (300) with the bridge in the foreground, is admirable. Mrs. Allingham is the same as ever; "In a Spring Garden" (333) is perfect in landscape effect and the grace of the figure. Mr. C. B. Philip's "Eastern Gable of Cader Idris" (187), Mr. Eyre Walker's "Still Waters" (181) and "The Time of Flowers" (202) are among the best landscapes, and "A Pastoral" (80) by Mr. R. W. Allan, who also sends various free and broad studies of town scenes, which it is interesting to contrast with Mr. Gregory's more realistic view "In Chartres" (68). Mr. Thorne Waite's "Four Miles from Charing Cross" (14) is a fine compromise between breadth and realism, and his "Hampstead Heath" (66) a beautiful and poetic evening effect. Among Mr. Hemy's contributions by far the best is "The Old War Ship" (277). Mr. Wilmot Pilsbury is getting less hard in style without losing his better qualities, "Early Springtime" (251) is a distinct advance in this respect. In "A Study of a Greek Vase" (261) Mr. Wallis carries this kind of work to perfection. Among small works of special interest are Mr. Field's brilliant sketch, "Now is the Month of Maying" (117), a riot of colour, and his quiet truthful little work "Thames, Morning" (137); and Miss Rose Barton's clever and artistic "Trespassers" (10). Mr. Tom Lloyd exhibits his usual quality of work in several drawings, but they are not quite as interesting as usual. Some drawings and studies by Sir E. Burne-Jones are to be seen; an admirable little work by Mr. Tadema (18), which is less like Mr. Tadema than usual; and an interesting small landscape by the new President of the Royal Academy "A Wild Garden in Surrey" (299), suggesting (like most of Mr. Poynter's small drawings of this kind) the idea of a large painting reduced to a miniature. On Jan. 25 there is to be a special exhibition of the works of Mr. Hunt, the two Fripps, and other deceased members.

THE ARCHITECTURAL ASSOCIATION:

GARDEN DESIGN.

THE third ordinary meeting of this Association was held on the 20th inst. in the Meeting-room of the Royal Institute of British Architects, Mr. John Begg (Vice-President) in the chair.

The Chairman stated that Mr. Beresford Pite (the President) was representing the Association at the annual dinner of the Manchester Society of Architects.

Several gifts to the library were announced, and votes of thanks passed to the donors.

The following were elected members of the Association, viz.:—Messrs. R. P. Baines, H. S. Barrett, A. F. Brown, W. L. Cock, G. Cracklow, C. L. Fleming-Williams, G. Ford, R. H. Haslam, E. M. Hick, C. A. Kelly, C. J. Kirk, L. Lee, A. A. Midwinter, A. C. Moule, G. S. Nicol, P. W. Reed, G. de Cœurdoux Shewell, J. H. Squire, F. W. Tancred, S. R. Taviner, A. H. Waller, A. F. Wicksteed, and F. Musto.

Mr. F. Inigo Thomas then read the following paper on "Garden Planning," illustrated by lime-light views:—

Fashions have come and gone in gardens as in everything else, and until lately for well nigh a century it has been the fashion to dispense with a garden altogether. That is to say, the substitute that has usurped its place is what in a better period would have been called a wilderness. In their haste to obtain a luxurious growth of rare shrubs and plants people have lost sight of the subtle charm that lies in a fusion of well-designed architecture and symmetrical spaces with natural foliage. And, above all, they have ignored the sense of fitness that a frankly-designed garden bears to the architecture of the house itself. It is significant to contrast the description of gardens that appear in the current horticultural journals with those of John Evelyn or any writer on the subject a few centuries ago. In the one, horticulture is the only point of view that is in any way recognised; in the other, a keen appreciation of design balances the interest taken in the growth of plants or in any new species that may come under notice. During the last few years the point has been discussed at some length in the leading papers and reviews. This has been partly due, I believe, to the almost simultaneous appearance of two small books on the subject called "Garden Craft" and "The Formal Garden in England," the latter finding a spirited antagonist in the Editor of the *Garden*. For many years people had been slumbering on in the belief that the surroundings of their houses were all that could be wished, and they resented being roused to thought on the matter. It is characteristic of the British public to think and sleep by turns in matters artistic, and in its wakeful moments it likes discussion to wax hot, for the hotter the discussion the quicker the formation of opinion and the return of slumber. The point at issue was the comparative artistic value of two rival methods, for there have never been more than two ways of laying out a garden. The "formal" and the so-called "landscape" or "natural" style. Paradoxical though it may sound, the formal method seems to have been the natural one until the middle of last century, and then, at a time when we should probably all agree that art in this country was on the decline, there sprang into vogue this fashion of attempting artificial landscape in the neighbourhood of the house. On a large scale, such as one sees at Blenheim, it may be said to have proved successful in the course of years. But surely, until the garden itself has been fitly and properly laid out, it is no time to launch into improvements to the surrounding country. And, furthermore, in a "landscape" scheme, by the time it is nearly ready for criticism, all traces of the originator's hand has been "kindly obliterated by nature," which makes a comparison of results somewhat difficult. With dignified reticence *The Edinburgh Review* stands aside till both parties have had their say, and then, at her leisure, she sums up the arguments for and against. There is just that in the summing-up that betrays her judicial bias, and twice has she given it in favour of a reasonable formalism. However, it will hardly be necessary before a meeting of architects to weigh the two methods in the balance, for those among you who have given the matter any thought will probably have long ago cast in your vote with the verdict of *The Edinburgh Review*.

On reflection, the development of architectural design in this direction has proceeded by very natural stages. In building, the prime object of man has always been to protect himself from the weather and from his enemies. To such a period belong all secular buildings, from the mud hut to the feudal castle. Next comes a stage in which men built for the pleasure of building, in addition to convenience. And lastly, a period into which is imported a third element, namely, that of display and magnificence. Beyond this stage nature seems to reassert itself, and drive us back to the verge of barbarism—at least, so it would seem to have been in England, at any rate, judging from its architectural history for the last century. Of these three stages in the development of ideas as to what a home should be we are concerned to-night with the last two only. House-planning was practised in a rude way in feudal times, but it was not till later that the idea of the house and garden making one concrete whole generated in the mind of the architect, and not till later still that the approaches and planting of timber were so ordered as to form integral parts of a conception that was sometimes colossal in its proportions.

Now, the formal treatment arrived at its climax in England in the second half of the seventeenth century, and in its fullest development we find two distinct spheres of design. There is the greater lay-out of avenues and approaches, scattered broadcast over fields and park land, heralding the proximity of the house; and there is the smaller lay-out of garden courts, and bosquets that cluster round the house itself. And, just as in planning a building, the plan, elevation, and section develop in the mind of the architect by equal stages, so the two lays-out and the plan of the house itself were made to accord, in the schemes of the seventeenth century. In the earlier examples that are left, we seldom find signs of a greater lay-out. This may be for two reasons—either that the avenues have perished and never been replaced, or, because being anterior to the Dutch influence and that of Versailles, they had never borne these stately attributes. Avenues, to be seen to advantage, should be planted on wide plains or table lands, for the long perspective, which is their chief beauty, is lost in a rolling country. But, in the smaller lay-out, the opposite holds good; so that the ideal site to treat would be one with more or less fall towards a level plain stretching away to the distance. The Roman Campagna, lying as it does in a circlet of mountain spurs, affords these conditions in a very marked degree, and the Roman magnates of the Renaissance were not slow to make use of them to the best advantage. I do not propose, to-night, to take you for a tour in the Alban Hills; but, at the risk of making some of our English examples look a trifle tame by comparison, we will begin with a few views of the Villa Mondragone at Frascati—to show how the old masters of the craft handled problems of this kind. You will see by this survey that the whole scheme of buildings and surroundings was planned so as to fall on four successive levels. A

centre line can be imagined running through from end to end, on which the principal features are plotted and a certain symmetry is observed on either side. And it is noticeable what pains were sometimes taken to preserve this balance, even in the most difficult situations. The approach from the road to Colonna, some 600 paces long and bordered with lofty cypresses, parts opposite a fountain in the foot of a great cliff of masonry, and climbs by means of "pentes douces" to the first terrace. This, in itself, is a rise of 55 ft.; and since the original fall of the ground was in a diagonal direction, a great deal of masonry was required to bring one end of the terrace to the necessary height. At four points in the parapet there are massive banded columns, each bearing on its summit a slender iron cross. These four huge sentries stand out against the sky and the olive-clad hills with magnificent effect; but their *raison d'être* was not quite so evident until I found that the great vaults on which the terrace is supported were once the palace kitchens, and two at least of the columns were nothing more than ornamental shafts to carry the smoke clear of the windows. This terrace was probably paved throughout with "palombino," and used for the reception of magnates, with their retinues, from Rome. But there seems to have been a garden under the palace windows on ground that rises gently to the level of the main courtyard. Here the buildings lie on three sides of a court planted round with rows of elms, the fourth side being divided by a niched wall from the Privy garden. This was laid out with plots of turf in borders of flowers, and two circular fountains in the centre. A fine arcaded loggia, by Ponzio, fills one end, and raised on a terrace opposite is an amphitheatre of inlaid marble fountains. From here a door and flight of steps lead back to the main-court entrance, and opposite this a wealth of flowers borders the foot of a great bastion wall that supports the bosquets and vineyards at a higher level still—that is to say, about 150 ft. above the level of the avenue. One curious thing about this plan is the small garden that lies on the roof of part of the building at about the same level as the great court of the palace. You can judge its position better perhaps in this view of the fountain, where a portion of the balustrade appears to the left of the picture. And here is a view of the great terrace, with the fountain and two of the columns mentioned above. The tops of the cypresses in the avenue are just visible over the parapet to the left.

Now let us turn from a noble site and great undertakings in the neighbourhood of Rome, to a level site and a humbler effort in one of our Midland Counties. Thorpe Hall, of which this is a survey, was built and laid out by Webb. You will see he has surrounded the house with a wall enclosing an oblong space 120 by 200 paces. He has put a gateway in each of the four sides opposite the entrances to the house, and relieved the long stretches of wall with a couple of niches at intervals. Next he has divided the space unoccupied by the buildings and offices into six parts. One is given to the forecourt, four to pleasure gardens, and one to the kitchen garden. The forecourt is bounded on either side by a wall balustraded on top, and has elaborate piers at the entrance. On the right side as you enter, a narrow alley is screened off as a way to the offices. The large garden to the east is again subdivided by yew hedges into three parts. The centre being given to parterre with a terrace on the right, and a piece to the left in which the design is no longer to be traced. The other spaces are a green court south of the house, a bowling-green, and a rose garden with fountains among the beds. There is one long vista taken through from east to west, starting with the summer house by the terrace steps, and ending in the entrance gate to the rose garden. On the whole, it is a very compact lay-out, under the simplest conditions, and is interesting as an instance of contemporary design in house and garden.

So far I have only shown you views from two places, purposely chosen from different countries and periods, and materially different from each other in scale of magnificence. But some of the principles that are common to both, and that ran through all garden design, will have been evident enough already. First of all, enclosure decided and uncompromising. Not of sunk fences or iron palings, but of good honest masonry, high enough to cast broad shadows early and late, and keep the wind from the flowers and fruit-trees. Then subdivision, either by subsidiary walls or hedges of yew or box almost as dense as the masonry itself. Then the proportioning of the surface of the ground with much the same treatment that a designer deals out to the façade of a building.

What was brought so forcibly into play at the Villa Mondragone was change of level, though there it was probably more from necessity than for beauty's sake alone. And a feeling after this quality was just traceable at Thorpe, too, in the terrace, where the flat site afforded no variety of itself. In neither was there an attempt at a greater lay-out, nor was water at all prominent as a means of effect.

Now I had not intended to tire you this evening with a history of garden design in England, for this has already been treated of elsewhere, and should be pretty well known by now. But I had proceeded thus far with my paper when, on looking back, it seemed to me that perhaps, after all, I ought to include a slight historical sketch. But I do not regret having shown you a few views to start with, as it may have served to fortify you against a tedious paragraph or two introduced to facilitate the explanation of what comes after. However, we need not go further back than the time of Elizabeth, for the first decided impulse in this direction followed on the dissolution of the monasteries by Henry VIII.

A house of that period was approached through an avenue and one or more courts in quiet tones of green and grey. Out of this rose a stately mass of buildings—two wings and a centrepiece—with broad retreating shadows between, sparkling with myriads of small panes set among softly moulded mullions. Through the walls on either hand, festooned with a wealth of climbing roses, there would be splashes of sunlight and colour from garden courts beyond, while at the back the brewhouse, offices, and so forth would be screened off from garden courts and orchards by walls of ample height. If there is one thing that was more characteristic than another of the pleasure-grounds of the past it was this system of enclosure and sub-division, and, to my mind, when that was abandoned the main charm of the old English garden vanished. Sir Walter Scott once raised his voice in lamentation over the destruction of an old garden he had known as a boy, and reading this lament I was reminded of just such a garden as Sir Walter describes. It lay on the hill side by an old house in Yorkshire. In the first court as you entered from the shrubbery were beds of brilliant flowers cut out in patterns like a ceiling in the house, and against the south wall were vineries of black Hamburghs and dark mysterious potting-sheds. Then there was the bowling-green, a wide expanse of velvet turf, with banks and terraced walks all trim and neat, where apricots and nectarines ripened on the walls. And one side was fringed with scarlet lychnis and sweet William, where the red admirals and tortoise-shells would spread their wings in the sun all day. Then there was the summer-house, with a racing fox for a vane, and bowls in a corner cupboard; an apple-house, where the old gardener was always at his best; and last, but not least, Peter the Great's arbour, for there, in defiance of history, tradition had fixed the spot of the Czar's proposal. But an evil day came when the quiet retirement of this unoffending paradise was invaded by the "landscape gardener." The walls were thrown down, the terraces destroyed, and the whole converted into a wilderness of specimen shrubs, for this was the new ideal that had taken the place of the old.

But to return to the time of Elizabeth. It was foreign to the idea of a garden to allow forest trees within the walls. The grove had its place, and that was outside the garden enclosure, where a lofty cliff of green would be more than welcome as a background to fruit and flowers. And it was probably from a wish to obtain a background of even tone that hedges first came to be trimmed. This trimming, or pleaching, as it was called, which seems reasonable enough on these grounds, was eventually carried to absurd lengths. They had felt the need of single yews to mark the salient points in complicated patterns of flower beds, and these they cut into a variety of forms: first into cubes and obelisks, and then, by degrees, into every shape that fancy might suggest, until at last the repose of the garden was as much hampered by verdant sculpture as Westminster Abbey is with its monuments. And since, of course, to keep the yews in shape requires considerable labour, it is hardly surprising that there should be few of the kind remaining. As I have said above, old gardens were divided into several departments, and each of these bore a character distinctly its own. There was the parterre, or flower garden, with its fountains, and flower-beds in geometrical designs of box. The bowling-green with its garden house and shaded seats. The fruit orchards, wilderness, and so forth. There is always a charm, too, in length of vista that could not have failed to appeal to garden designers. And to give point to the long perspectives that were planned to pass through house and grounds alike, they were adorned at intervals with fountains, statues, or other objects of interest. Each of these would form the centre of a network of cross vistas, so that sunlight or shadow, front view or profile, should offer the scene afresh as often as it was approached from a new direction. When large sheets of water came to be included in the dressed grounds they too were treated in the same formal manner. The most ambitious efforts in this direction were probably of Dutch origin, and due to the same energy and skill that made the canals and huge drains of the Fen country. Here are two instances from Drest, in Bedfordshire, a T-shaped piece of water some 400 paces long, with broad turf verges next to the groves, and the fish pond in a secluded spot in the wood among yew hedges that are now some 20 ft. in height.

The development of garden design may be said to have been the elaboration of these few principles, for the object of the old-time designer was to make a stage on which to play the drama of everyday life; but, unlike the stage, the scenery was real, and the acting an unaffected pleasure in existence and in the sights and sounds and scents of nature. Architecture lost a little of her sobriety in the summer-house, and sculpture a trifle of her classic finish in the garden.

The statuary used in the ornamentation of English gardens was mainly composed of lead, and, if we are to believe the date on a figure of Nelson at Fingask, in Scotland, the old moulds were still in use as late as the year 1820. This view of a group of Scotch peasants carousing over dropped scones, whisky, and cheese, is from the same place, the costume and clumsy modelling of the figures belonging to the eighteenth century. But there was better work done in lead than this. Here are a couple of photographs from two places in Northamptonshire. Both the figures are evidently from the same mould, and, if I am not mistaken, they are casts of the "Samson" by John of Bolegna that is now at Hovingham, in Yorkshire, and was presented to the Worsley of that day by George III. This taps an interesting vein of speculation; for we know that one Cheere had a foundry for such work at Hyde Park-corner, and perhaps his enterprise led him to obtain permission to make a cast from any sculptor's work of repute that came into the country. Then there were leaden vases, sometimes exquisitely wrought. These two photographs are of good examples; and those on the steps in the background of one of them reappear at places as wide apart as Sprotborough and Penshurst. Later on there was a fashion for hounds and sphinxes, which latter seem to have come in with the Brothers Adam. This is one of a very fine pair in Scotland, and I fancy those at Sion House are from the same mould.

Perhaps the period of greatest activity may be placed in the reign of William and Mary, for to that time belongs the English classic on the subject, a fine folio of views drawn by Knyffe and engraved by a fellow-countryman of the name of Kyp. Then we have the diary of Celia Fiennes, a lady who spent some years riding about England and taking a lively interest in the improvements that her many friends and relatives were making to their country places. And to this time, too, belong the great plans of Wren's devising for the beautification of Hampton Court. But with the progress of the eighteenth century interest seems to have flagged. People, perhaps, began to tire of spending the sums that their over-grown schemes must have needed to keep up. Pope struck a note of ridicule, and the stupidity of a decadent age was ripe to hoot them out of fashion. Then came the opportunity of the landscape gardener. Kent and "Capability" Brown stepped on to the scene, and though they mowed down avenues, and destroyed every vestige of dignity under the pretext of "helping nature," they seem to have forgotten how to make a garden.

It is mainly due to people of this persuasion that so few of the fine old places are left intact. But there is a more potent influence at work in many parts of England at the present day. The smoke of factories, mines, and foundries is killing the timber, robbing the colour from the stone-work, and driving out the occupants from many an old-world paradise. And the only hope is that force of association will lead them to build and lay out their new homes with some of the

dignity that still clings about the old. In connexion with the greater lay-out I spoke of the influence of Versailles, and probably the extension of design beyond the limits of the garden proper, was a good deal due to rumours of of what the French King was doing near Paris. Moreover, Le Notre is supposed to have come over to England, and to have done some work in and about London—if not in the provinces.

It must be admitted, of course, that he was a great master of his craft; but, to my mind, either his own ambition, or that of his royal patron, ran away with him at Versailles. The spaces are immense. So vast, indeed, are they that one cannot help feeling the place is out of all scale with humanity. Moreover, there is nothing in the conception of the palace itself to warrant this treatment in the grounds. The extent of the façade is great, no doubt, but there is nothing Titanic in its structure, nor is there any great elevation from which it might be possible to grasp the huge scheme of terraces, bosquets, and fountains that surround it. I think there is much more feeling for proportion in the lay-out of the Trianon, and though it only forms a part of the great scheme at Versailles, at the same time it is sufficiently complete in itself to be looked upon as a separate conception. As will be seen from this old plan, the parterre under the windows centres with the house and forecourt, and it is not till we descend to the parterres enclosed in Berceaux on the second level that the influence of the great scheme in connexion with the king's palace begins to make itself felt, and a fountain with two pavilions and alleys beyond are made to centre in some measure with an arm of the great canal that intrudes on the left of the engraving.

But whatever influence Versailles may have had on contemporary work in England was probably through the medium of Hampton Court, and to follow the changes through which that palace has passed is to read the history of garden design in England. Then, too, there was the Dutch influence that came in with the Hanoverians, but exactly in what direction that differed from the French I am not in a position to tell you, for I have never travelled in Holland except as an etcher, and, accordingly, have had no opportunities of studying existing remains.

But this sheet from an old atlas of the country round Delft goes to prove that an architectural lay-out was not altogether unknown there in the seventeenth century. A careful inspection of the map shows the meshes of the intricate network of dykes to be filled with the most elaborate designs, in which the paths, borders, fountains, and even the statues are distinctly visible. And, judging from the pains these Dutch engravers took over their work, there is not much reason to doubt their accuracy. Here is one, for instance, in the environs of Ryswyk, near the Hague. The house and dependencies lie round a square court, and are approached from the road between two groves, with glades radiating from circular pools in the centre of each. Then comes the forecourt, laid out in plots of turf and walled off from small flower gardens on either side. Through the house a long terrace runs right and left, and then the main garden, set out with four large fountains, two pavilions, covered alleys, turf plots, and flower beds. Round the whole a double row of trees, a wall, and then the inevitable canal. Here is another engraving that tends to show how lavish was the expenditure of the Dutch nobles in their country homes.

Ideas direct from Italy do not seem to have had much influence in England after the time of Elizabeth. Their work was always more severely architectural than ours, and in the meantime we had begun to look to nature for more of our effects. In outdoor architecture there has always been a scenic and playful character, though with us a certain restraint runs through the work that is not so observable in the south. This view of the organ-case at the Villa Deste is a good instance of Italian extravagance. It is built of the rudest materials, rough brickwork and some sort of black concrete, but coated over with boldly-modelled stucco, and finished with gesso-duro and colour, some of the panels being a very fair imitation of bronze relief. There is something of a stage-like effect, too, in the way this building is perched on a terrace and reflected in the still waters of the pool beneath. Another quaint conceit at the same villa is the long stone trough that borders the upper side of a terrace and receives ninety jets from as many fountains, each with a subject-panel from Ovid's Metamorphoses.

At the Villa Lante, not far from Viterbo, Vignola has been quite humorous. In the foreground of this view is a stone table for *al fresco* feasts, down the centre of which runs a stream of water as a cool accompaniment to the meal. Behind the table rises a combination of fountain and staircase, with a colossal deity on either side. And hanging his claws over the balustrade above is a giant stone crayfish that the architect has inserted in punning allusion to his patron's name, and drawn out is seventeen long vertebræ to form a channel for the water.

But these are palaces and playgrounds for the courts of kings, and we are mostly concerned nowadays with people of humbler station. If I had started with the cottage garden, worked upwards a little way, and then stopped, perhaps my paper might have been of more value to you. But when we architects get together to talk over such matters as these, the temptation to speak of the great deeds of the past or to build airy castles for the future is too strong, and we yield. And I venture to think we feel the better for yielding. But I am not so sure, after all, that the castles we build for the future will be nothing but air. There is a tendency on foot in some quarters to treat the matter with that seriousness that all thoughtful work deserves. And to illustrate this I will try to describe to you one or two places of my own devising that are either finished or in progress at the present time. But we have been flying high, and though I have the greatest respect for the pluck that some of my clients have shown, still we are in the nineteenth century, and it must necessarily be a great descent from the work of the old master to our modern efforts. Here is a plan of one in Dorsetshire that has been finished and growing into shape some three years or more. The house was of various dates, mainly from Edward VI. to Elizabeth, but with other additions down to the present century. The wing to the left, and that containing the dining-hall, it was decided to leave untouched, but the comparatively modern work in the south and right wings is shown in the drawing, rebuilt on the same lines as the older portions. The site of the present gardens was a grass field, falling somewhat from left to right. There were a few trees here and there, and a larch plantation across the windows of the south front. The high road bounded the ground on the left, and a back drive skirted the near side of the field, and continued behind the grove to the back of the house. When the ground was cleared of trees and the roots grubbed up, the soil from the south garden and pool was excavated and removed to form the terraces round the sunk garden. Lines were laid down to make vistas through the centres of the courts, and sundial, fountain, or wrought iron grille placed where most they seemed to be needed. There are three main lines on which the work is planned. One from the south gate catches the reflection of the house in the long pool, passes through the doorway in the south front and out into the court beyond; thence down the centre of the tennis-lawn, and across a pool at the end to a sculptured figure in a yew hedge by the river. Another line, centring with a window in the left wing, passes down the rose garden and through the circular coronet to a niche fountain between the two arches at the far end. The third is taken from a summer house in the grove to the right, across the south garden, through the coronet and up a flight of steps with a wrought-iron gate, to the sunk garden. Here it catches the fountain and continues up another flight of steps to end in a stone seat that projects from the back of the terrace. The water for the fountains is forced up by a ram in the river to a couple of tanks in the roofs of the pavilions, which gives it a fall of about 20 ft. to the long pool in the south garden. All the stonework, with the exception of a little Doulting, came from the Ham Hill quarries. It is a warm, rust-coloured stone, taking a grey lichen, and I have tried to embody some of that variety in the walling that makes such a marked contrast between the old work and that done at the present day.

This is rather a disconnected scheme and has the prime fault that neither of its main axes lead up to the chief block of the house itself. However, this must often be the case when the house and contiguous buildings have already been erected before the grounds are designed. The plan may be divided into two distinct parts, namely, the gardens proper, which are enclosed within walls or other architectural boundaries and the scheme of avenues, planting, and earthworks outside. Here is a cricket field bordered with banks and terraces, hedged round and planted on three sides, with a pavilion and seats for onlookers under the trees. East of this is a paddock and deer shelter where the herd would be fed in the winter—forming a pretty picture among the surrounding timber. And south of this again is an apple orchard and circular pool enclosed in a grove and centring with a door from the walled gardens. Unfortunately the flower gardens have had to be planned on the north side of the house where the ground is formed into three successive levels ending in a balustrade and sunk fence towards the park. The extent of the walled gardens is marked by a pavilion at either end, and the long central vista is terminated eastward by a bastion with a figure of Sir Philip Sydney, and to the west by a semicircle of twelve terminal figures representing the months of the year, with piers and wrought-iron gates in the centre. There are square-walled sun-traps set about with seats at either end of the lower terrace—but of this you can form a better idea from the photographs.

This is a simpler scheme of suggestions that was made for a place in Norfolk a few months since, but is, I regret to say, going to remain on paper. The problem was to add some gardens to a house built some twenty years ago, and designed without envisaging any architectural treatment of the grounds about it. The site was pitched on a high plateau, falling away rapidly in a wooded hill-side at the back of the house, and from the edge of the plateau a magnificent view of the Wash, and Boston Stump in the distance, was visible through the trees. For a smaller lay-out I suggested a fore-court and three garden courts, plotted as shown on the plan. And to make the most of the distant view, an elliptical lawn was to be hollowed out of the hill in a line with the central alley. This was to be balustraded and buttressed with seven life-size stags on the parapet, and belvidere pavilions at either end. For the greater lay-out there was to be a fan of five avenues, radiating from the centre window of the saloon and springing from an arc with a radius of 200 yards from the point of intersection. The local stone is of a deep rust colour, and never looks garishly new, which made one all the more keen to handle it.

The principles I have been enunciating were not, of course, confined to the surroundings of country houses only. They were, and are still, equally applicable to town houses where there is any ground to treat, and also to the streets and squares of towns. There are not many towns and villages in England that have been laid out with much attention to this, though I daresay with thought one could enumerate a few. Pitcairn-green, in Scotland, for instance, has a pretty plan and a festooned arrangement of trees, that gives it quite a gala-like appearance. It is easier to call to mind instances in France, and the two that suggest themselves most readily are Quimper and Quimperle in Brittany. The latter, especially, with its trim canopy of green, surrounding the square like an awning, under which one can wander round in the shade from the Hotel de Ville to the river.

I have been applying these principles to a budding town in Ireland. Strange though it may seem, there is apparently one spot in that "distressful country" in which trade seems to be on the increase. The causes are natural, but with them we are not concerned this evening. Taking time by the forelock, the intelligent owner of this village and the land about it has had a scheme prepared, of which this illustration shows the plan in block. The principal streets and squares are laid out as you see, and by the time the place is built up the avenues and groves should be affording some shelter from sun and wind. The court-house forms the focus of the whole arrangement. Beneath it is the butter market, and through the trees across the road the houses and shops that form the market square. There are two pools and groves of trees at one side of the square, with tall columns for electric light at intervals in the balustrade. Down the street to the west we catch a glimpse of the Calvary in the churchyard wall, and up to the east a fountain. The main buildings and shops round the market square are designed in the rough, but are only to be built as they are required.

Now it is a fault with most of us to somewhat overrate the beauty of things we have lately seen. Our enthusiasm outruns our judgment, and could we but know it, the undigested mass has not had time to settle; so I may as well confess that I have not long returned from a miscellaneous tour in Scotland, which may account for a certain preponderance of Scotch views; a tour comprising most things, from surveying the pace of a racehorse to pacing the survey of a scheme of laying out. And with your leave I will close my paper with a slight sketch of what I saw there. It is the gardens, of course, that I am going to

tell you about. What the crofter said as I lay under sacks in the bottom of his cart, or what the kilted Laird whispered across the river when asked for leave to see his castle, these things are incidents by the way, and belong to another story.

Castle Kennedy, near Stranraer, was the first point I made for. I had been told by all the young ladies at the Ayr meeting that, with the exception perhaps of Versailles, there was no such place in Europe. Well, here is a plan of the lay-out as it was in 1830. It is large for England (about half a mile through), and lies in a beautiful situation between two lochs. But, do what I could, I could find no exceptional merit in it, and on the whole went away disappointed. The specimen tree is rampant, even to the extent of some of the ilex avenues having been replanted with puzzle monkeys. And the new Castle of Loch Inch has been built across the upper end since this plan was made. Thence to Dalziel, in Lanarkshire, which is a fine old castle, with hanging gardens between it and a burn that runs close under the walls; and while there I paid a visit to Wishaw House, only to find the old garden forlorn and derelict, a playground for the rabbit and the mole. From Dalziel I went to Edinburgh, and so to Newhailes, a fairly complete lay out, finished and adorned probably by the brothers Adam. You have already seen the leaden sphinx at the corner of the beech walk. On the other side of Musselburgh lies Pinkie House, with its beautiful gallery ceiling and stately walled courts. But I was only there about twilight, so have no photos to show you. Perth was the next point, and a good centre for most of what is interesting in Scottish architecture.

Drummond Castle, near Crieff, claimed priority from its reputation, but excepting the terraces below the castle walls and the green court, I thought it disappointing. There are grand masses of yew, and the floriculture is wonderful; but the great garden below lacks enclosure, is marred by the specimen shrub, and, moreover, it is not levelled. But to my mind the harmony is most destroyed by the high note of colour struck now and again in the white marble figures and busts, of which, to say the least, there is no scarcity. Next I went to Fingask, and fell in with that jolly band of leaden peasants to which you have already been introduced, and not far from them, guarded by a terrible watch-dog, was this charming arbour. The garden at Murthly is small, but full of surprises. It was the subject of Sir John Millais' picture of an old garden, and lies under the shadow of a huge "modern Elizabethan" house, a house that never was tenanted, but can boast of a fine approach of lime avenues, and a bowling green, overlooked by story above story of blank mullioned windows. Not many miles away from this lay Stobhall, on a steep green slope, overlooking the brawling waters of the Tay. Scattered up the hillside and along the crest by the wood was a haphazard cluster of buildings; and spires of yew topping a terrace wall betokened the presence of an old garden. It was almost sunset before a friendly boatman could be found to ferry the river, but I would not have had the shadows any shorter, or the light a whit stronger, else the mystery of that little Eden might have been marred. Here is the sundial among a few simple beds cut in the green sward. The house, the chapel, and the garden were all in miniature, and the whole charm of the place lay in its proportion, position, and colour; a symphony in dark greens with a setting of pale autumnal flowers.

Melville, in Fife, came next, and was interesting for its scheme of planting, and also for a forecourt designed something like that at New Park, in Surrey. The house and wings enclose one end of this forecourt, and the end towards the avenue has a gate in the centre, with flying figures on either side. The gilded vanes of two pavilions fall on a line with the counter avenues. This view shows the effect from the main approach, with one of the lodges on the left. The gardens were, no doubt, at one time on the far side of the house, but the site of them has long ago been thrown into a park, the main entrance made on that side, and the original forecourt converted into a flower garden. In the woods at Melville, which, by the way, are all part of the design, there is a circle of beeches, 100 paces in diameter. The effect is magnificent. A wall of sombre green all round, 100 ft. in height, melting from shade into sunlight, and row behind row of sturdy trunks, receding into the gloom of the woods beneath. Eight paths in a level lawn radiate from the centre, where, no doubt, there once stood a temple dedicated to some sylvan deity. A fortnight later I came upon a somewhat similar arrangement in the woods at Tynningham, but on a much larger scale. This time with a turf terrace all round. But in the interval rain and wind had stripped the beeches of their leaves, and robbed it of half the charm it might otherwise have possessed.

One or two more places in that direction hardly worth mentioning, and then in and out of the way corner of the county a couple of circular dovecotes on either side of some entrance gates led to this charming old house, with a really beautiful garden. But there was such a gale blowing that in spite of the sheltering walls photography was difficult. It was the lower garden, however, that took my fancy, with stairs at either end, and twelve busts of the Cæsars perched on bold, projecting buttresses along one side. Crathes was the next to be visited, and perhaps the salient feature of the place is the great yew hedge on which it would seem a coach and four could travel quite gaily. The castle itself is interesting and has a fine lime avenue on either side of the old approach.

It is with flat sites in low-lying countries that we generally find the boldest schemes in artificial water and planting. The land is probably divided into squares or rectangles by the necessary dykes, and to plant the banks of these dykes with rows of trees seems only natural, both to protect the cattle out at grass from the wind, and also to lend shade to the wide droves between the pasture A long trudge over sand dunes on the coast of Elgin brought me to Gordonstown, a place of this character. You will see by the survey that it is an arrangement of some regularity. The house and grounds lie enbosomed in groves and enclosed pastures, with a long piece of formal water to the south, the soil from which has gone to form broad embankments on either side. To the north there is an ample forecourt, and winter gardens are set in the groves on either side the central approach. As far as these latter are concerned, the plan is mainly conjectural, as they have practically disappeared, and I had no time on the spot to search for remains. However, the old bee-hive shelters still exist in the wood facing the two central alleys of the gardens. They are of stone, with pent roofs, and a solid wall at the back to keep out the north wind. All the stabling, grooms' lodgings, granaries, and other farm buildings are collected round a circular court, which is an arrangement I had not seen elsewhere. The effect of this from the interior is delightful, the long sweep of roof being broken here and there by rows of dormers and crow stepped gables over the party walls. There were one or two places further north still that I should have liked to visit; but there is a limit to human endurance, and apparently none to that of the Scotch weather fiend when he is ill-humoured. So, mid drifting clouds and soaking moorlands, I sped southwards, and, paying a visit en route to Biel, near Dunbar, and the great "lay out" at Tynningham, that was wrecked in the gale of 1882, I made my way to London—dear old London, with a cab strike all ready at the terminus, and a small black cloud on the horizon, that meant a paper to be written for the Architectural Association.

Mr. J. A. Gotch said he had much pleasure in proposing a vote of thanks to Mr. Thomas for his interesting paper, illustrated as it had been by so many beautiful views. Few of them could hope to have the opportunity of dealing with such enormous lay-outs as the Italian villas seemed to have, but even from them they could gain some few notions. One of the principal ideas that one gathered was, as Mr. Thomas had said, the excellence and desirability of a formal lay-out. He himself was not one of those who would go in for formal lay-outs alone, because a combination to a certain extent was preferable in ordinary cases. In a large scheme like that of Versailles, and places of the kind, the formal lay-out was unavoidable, though at the same time, it was generally done on such a large scale that people were unable to appreciate it unless they had a plan in their hands. It seemed, therefore, that something on a smaller scale was more desirable. And when one came to consider what was to be done in producing a garden at the present day, they ought to be careful not so much to get a Dutch garden, or a garden of some particular period, as to consider the principles which lay at the bottom of garden planning, in the same way as they did when engaged in house planning. It appeared to him that some few of the principles would be as follows:—The garden should be so arranged that portions of it could be seen from the house. They ought also to be able to see different views from different rooms, and particularly they should not be able to see the whole of the views at once. The garden should be so arranged that it was quite as much suggestive in what was not seen as it was interesting in what was seen. This was a principle which applied to almost any kind of design, and certainly to what might be called theatrical effect. The garden should be also so arranged that the house could be judiciously seen from it. One should not only be able to get a view of the house, but there should be a certain number of vistas, which should, if possible, be terminated by something of an interesting nature, such as a summer-house, or perhaps a statue. A summer-house need not always be placed at the end of a vista, because summer-houses were often better in somewhat secluded parts of the garden. Besides this, there should be certain parts of the garden which were not easily seen, with thickets for birds, and places only penetrated by the gardener, and those in search of tennis-balls. They should also consider that the youth of the present age were considerably addicted to games like tennis, whilst old age was addicted to bowls. Such games required to be played on smooth surfaces of turf, and therefore these ought to be dominant features in the laying-out of gardens, thereby producing large spaces, either perfectly level, or nearly level. These spaces, too, were all the better if they were at different altitudes. The access should be convenient, and they should be divided by some definite sort of boundary, such as a yew hedge, which grew more quickly than many people were apt to think. Such a hedge formed a beautiful background in the winter, when its foliage was dark, and also in the spring, when it was bright green, always contrasting well with the shrubs. Moreover, a hedge gave a straight line to the view, which was very desirable, and showed off the irregularity of the naturally growing shrubs. It was also important to have the paths to a certain extent level and dry, so that people might be able to walk upon them with ease, and to discourse without loss of breath. It was, of course, a good thing to be able to descend from one level to another by steps, and not by slopes, although those who were fathers and mothers of young children would confess that steps often led to serious contusions. Indeed, he had known cases where the garden had been laid out in the early days of a family with slopes, and afterwards with steps when the children attained to years of discretion. It all came to this, that the garden should be designed as they designed a house, according to the dictates of common sense; and common sense, put into beautiful forms, seemed to be the foundation of the useful arts—of the art of gardening, as well as the art of architecture. Mr. Thomas had shown them some exceedingly interesting and fine specimens of gardens, especially those of the Italian villas. He was acquainted with another Villa d'Este, situated on the Lake of Como, which was a most pleasant place. There one had what seemed to be a large modern hotel, while, on turning the corner, a tremendous sixteenth-century avenue could be seen, going up hill, and leading to an alcove containing a statue. This vista was bordered on either side by a number of water troughs, about 6 ft. long, and as wide as a table. The water fell from one to the other of these, and as there were about 120 of them in all, the total rise would be something like 100 ft. to 150 ft. All this was contained in the hotel garden, so that one got excellent accommodation there, with the study of architecture thrown in. With regard to the larger lay-outs in his own district, near Kettering, there was an enormous one, which was quite unintelligible unless the plan were studied. In this case the avenues did not all focus on the house, but were in communication with it. It was said that these avenues totalled up to the extraordinary length of seventy miles, and it was stated that the Duke of Montagu was very anxious to plan an avenue up to London, but as there were difficulties in the way he planted the same length of avenue on his own grounds. In any case the avenues were quite as much a feature in the landscape as the ocean was at the seaside, and, in fact, one could not get away from them. At every period of the year these avenues were impressive, either by reason of the great mass of foliage in summer, or by the beautiful tracery of the boughs in winter.

Mr. F. G. F. Hooper seconded the vote of thanks, and expressed the pleasure he had received in listening to the interesting paper and seeing such a fine collection of photographs thrown upon the

screen. The subject was one of such technical nature that he would not discuss its details, but only express his thanks to Mr. Thomas for his very interesting paper. He hoped that papers illustrated by photographs would become more and more numerous, as they had marked an era in their existence that evening by using a lantern of their own for the first time. The lantern had been purchased by the Committee aided by a substantial gift from Mr. Fleetwood, President of the Camera Club, and would be available for all future meetings.

Mr. F. M. Elgood said he would like to make a few remarks, which might lead to discussion. Was it perfectly correct to say that every one was now agreed that a formal garden was the garden of the future? Great stress had been laid upon long vistas, extending from one end of the garden to the other, and in one case they had been shown an example of a vista running through the house. This seemed to him to be all very well on paper, but it did not appear to have the slightest object or use in a garden. It was also mentioned that in the case of very large lay-outs, they could only be properly understood with a plan. If that was so it seemed to him that they might as well have little bits of formal garden, and go into each one separately; for even in large houses people were not at all likely to provide visitors with a plan when they walked round the gardens. In fact, he considered the plan of a garden was a great nuisance. He did not wish to say that a formal garden was not an excellent thing, but he considered that the formality might to some extent be leavened.

The Chairman said that Mr. Thomas had given the members a great treat that evening. They were all very much interested in gardens, and would like to know much more about them than they did, especially those who lived in towns. Some of them had the privilege of being in the neighbourhood of Tunbridge Wells last autumn, where they saw some delightful gardens, notably Mr. Devey's garden at Penshurst, and the garden designed by Lord de Lisle at Penshurst Rectory.

The vote of thanks, on being put to the meeting, was carried by acclamation.

Mr. Thomas, in reply, said it was difficult to get discussion on a matter like this, on which architects were very much agreed. One of the speakers had endeavoured to start discussion by saying that formality might be carried too far. In the first place, much depended on what the speaker meant by an undue formality, and indeed it all depended on what his standard of formality was. He (the speaker) considered that the enclosure and the forms on the surface of the ground should be defined, and also that the minor enclosures should be strongly defined, such as the box edging of the flower border, while inside that the flowers should be allowed to run riot. The same thing also applied to groves of trees. They did not want, as was done in France, the whole of the grove clipped into the form of box. They wanted the sides of the grove pleached where there were alleys, so that the view of the vista and the whole effect should not be interfered with by the crossing of the growing branches. In order to build up form out of growing things and retain proportions it was necessary to curtail their dimensions to a certain extent from time to time. There was an opinion abroad that formality should [begin near] the buildings, and be gradually watered down as they reached the solitary country; in other words, that there should be a definite line drawn between the home of the man and the home of the beast. A question had been put as to the feasibility of carrying vistas through the house, but he saw no impossibility in regard to this; if the house was in the centre of a long vista, and raised on a terrace to a considerable height, it might be possible for any one standing in the flower-garden to see through the house, gardens, and groves. Of course, the more distant a point the vista led to the larger should be the object at the end of it. Mr. Gotch seemed to have spoken a little discouragingly of statuary, but he (the speaker) thought it was too much discouraged in English gardens. Statuary lent great charm to gardens abroad, where the marble took a fine gold and black lichen. Marble, however, should be relegated to Italy, for in this country something with more texture was needed. In reply to what Mr. Gotch had said as to their striking too high a note of grandeur, he thought that depended on the scale of magnificence in which any particular scheme might be conceived.

Mr. Gotch explained that he meant too high a note of grandeur.

Mr. Thomas continued that he was acquainted with the avenues Mr. Gotch had mentioned, near Kettering, and the marching and countermarching of these avenues was something extraordinary; in fact, he could imagine nothing finer. The subject was an enormous one, and he had merely touched the hem of it that evening. He had only shown views from one Italian villa, whereas he might have given many examples; while Germany and France were also very rich in fine gardens.

The Chairman then announced that the next meeting would be held on Monday, December 4, when Mr. H. H. Statham would read a paper on "Street Architecture."

The proceedings then terminated.

DECORATION OF PUBLIC BUILDINGS.

THIS was the title of the third of the lectures in connexion with the Arts and Crafts Exhibition, given on Thursday evening last week by Mr. Walter Crane, though the title hardly expressed the real scope of the lecture, which was, for the most part, a general criticism on the aspect of London, and of London buildings. The lecturer commenced by observing that there were two species of decoration of buildings, that in which the decoration was an integral portion of the architectural design, and that in which it was something added to and independent of the architecture, which formed only a frame to it. The general aspect of our towns was a kind of expression of our national sentiment, and as such was not promising; a few buildings here and there, perhaps, were haunted with the romance of a past age. The adaptation of light to modern buildings was not satisfactory. At the introduction of gas our buildings were filled with projecting tubes which were very ugly, and the attempts at designing gasaliers had been very unsatisfactory. Gas was followed by electric light, but here again there had been little attempt to make the means of lighting decorative, though in the exhibition in which they were assembled there were some examples of well designed electric light brackets. In our cities we were surrounded by attempts to make the architectural clothes of the past fit the needs of modern citizens. Prominent examples of this were to be seen in the Exchange and the Mansion House, and it was to the Guildhall that we had to go to find anything like a genuine municipal architecture. Coming westward we arrived at St. Paul's, a building of great merit, about the decoration of which a great deal had been done lately, though in fact there was no building in the world that less required decoration. The mosaics in the choir, however, had the merit of showing a recurrence to the true method of treating mosaic surface. Our Courts of Law were enclosed in a fortress of thirteenth century architecture. In the towers of the Houses of Parliament we found, however, an example of a very effective method of giving decorative effect to buildings externally. The interior paintings of the Houses of Parliament could hardly be called a success either in treatment or arrangement of subject; they should have illustrated more directly and simply the history of the English people; but in Mr. Poynter's mosaic of St. George in the octagon hall they had a really fine example of interior decoration. The sense of unity and repose was recovered when we entered Westminster Abbey, a building erected when England was a comparatively small and poor country. In the decoration of cities on special occasions bunting played generally a large part, and it might be observed that flags formed a very effective method of temporary decoration both in regard to appearance and symbolism. In the treatment of street houses each house should have its own distinctive badge, and name-plates could be treated in a decorative manner. Coming further westward in London we found the Albert Hall, the mosaic frieze of which was not a bad effort in decoration, and in the Albert Memorial close by we had Mr. Armstead's sculptured bas-reliefs, which were excellent. The most finely decorated interior in London was the National Gallery, for the decoration was all of high class paintings. The decoration of a public building ought to be the highest form of popular art, but popular art was at present mainly represented by the posters. In regard to general alterations and improvements in cities it was curious to remark that while primitive men commenced by clearing away forests, we commence by clearing away houses. But the history of localities should be preserved, and the style of new additions should have some relation to the style of the town-hall which was their centre. The Public Library at Massachusetts might be mentioned as a very successful public building, though simple and unadorned in exterior style; internally some very fine decorations had been carried out there by Puvis de Chavannes and others. The paintings by Ford Madox Brown at the Manchester Town-hall afforded an excellent example of decorative painting, forming a general pictorial history of Manchester and a kind of typical history of England. The windows unfortunately came too close down on the paintings and somewhat interfered with their effect. If every large town would follow the example of Manchester in decorating its town-hall in this way, we should soon have a development of decorative painting in this country; it was the opportunity that was wanting. The chapel built by Mr. Horne in the Bayswater-road, which was being entirely filled with decorative painting by one artist, was an example of what might be done in buildings of this class. Churches were the most suggestive of buildings for interior decoration, for everything in them afforded occasion for decorative treatment. Schools were another type of public building where mural design might be introduced. Mr. Crane passed on to enumerate the various materials and methods available for decoration, observing, however, that a building might be crowded with what was called "ornament" and yet not be decorated in the true sense. The sculptor was still the chief decorator, though the final and highest of all decorative materials was mosaic. But it must be remembered that mosaic, if used, must be dominant and exclusive; it would not combine with other methods.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, Sir Arthur Arnold, Chairman, presiding.

Loans.—Upon the recommendation of the Finance Committee it was agreed to lend the Hammersmith Vestry 38,935*l.* towards the cost of an electric light installation; the Vestry of St. Martin's-in-the-Field 2,070*l.* for wood-paving works; and the Guardians of St. George's Union 8,000*l.* for drainage works at the Union Infirmary and at the Fulham-road Workhouse.

The Works Department.—The whole of the sitting was devoted to a continued debate on the subject of the Works Department.*

The Earl of Onslow, in the absence of the Earl of Dunraven, moved:—"That a special Committee be appointed to inquire into the management and financial position of the Works Department since its inception, and as to its future prospects, and to report to the Council thereon; and that it be an instruction to the Committee to appoint two assessors to assist them." He said he was not led to propose the motion by the belief that there would be any great discoveries made regarding complicity or instigation by any member or members of the Council. If such were the result he was of opinion that the Council ought to be dissolved, and go the way of the Metropolitan Board of Works. The Committee should inquire into the object the Council had in view in creating the Works Department. He wanted to know whether such an enormous expenditure as was entailed was wanted to break up a contractors' ring, and to get fair wages. He anticipated that the Committee would find that the Works Department had effected a saving to the ratepayers in certain works, but in others the intervention of a contractor had been an enormous saving to the ratepayers. After enumerating various amounts and the cost of certain works which showed losses to the ratepayers, he said the Council had realised that Mr. Burns' "mare's nest" was a series of malpractices by officials to cover up the failure of a political policy. The unanimous voice of London demanded that the whole history of this gigantic experiment in Socialistic municipalisation should be laid bare to the public.

Mr. Corbett seconded the motion.

Mr. Costelloe said he proposed to move an amendment to the motion of the noble Earl by introducing the words into it after "thereon," "and that it be an instruction to the Committee to compare the work done, as regards cost and quality, by the Works Department with that done by the contractors." He complained that they had not had a fair criticism, but that the Moderate Party had tried to make an election use of something which had nothing to do with the general efficiency of the Department. There

* See our last issue for notes of the previous debate, page 426.

was nothing to show that the Works Department was a business failure. He thought they had not paid large enough salaries, and hoped that a more politic course would be adopted in the future.

Mr. T. M'Kinnon Wood seconded the amendment.

Lord Onslow said he wished to make the inquiry as exhaustive as possible, and on that ground he had no objection to offer to the amendment of Mr. Costelloe. But he thought that it might lead to a possibility of a very great delay, and might involve, carried out to the end, such a thing as taking up all the main sewers of London. If Mr. Costelloe would consent to commence the amendment with the words, "and take the evidence of the architect, engineers, and other officials as evidence of the work done," he (the noble lord) would accept it.

Mr. Costelloe declined to accept the limitation.

The Deputy Chairman said the policy of the Works Committee was not to smash the Works Department. They demanded at the last election that there should be a profit and loss account. That was objected to by the Progressives. He believed that the result of the investigations would be that a wise limit would be placed on the work given to the Works Department. He was afraid that Mr. Costelloe's amendment would result in postponing the publication of the Report of the Special Committee.

The Chairman, having been appealed to, stated that the word "management" in the original motion would, in his opinion, include "quality."

Mr. Ward, Chairman of the Works Committee, said that when contractors were determined to do bad work, no amount of vigilance on the part of clerks of works was of avail. The School Board had had to expend, on school after school, from 500*l.* to 100,000*l.* in doing work which the contractors were supposed to have done. The Council must consider quality as well as cost. It had been suggested that the Department only took the plums of the work going, but it had accepted nine-tenths of the jobs offered to them, and some that they had refused they had not refused because they thought they could not do them within the architect's estimates, but because the sites were not well placed geographically to enable the undertakings to be carried out. As to the works referred to last week by Sir John Lubbock as having been carried out 6 per cent. below the estimates, they were mostly small works, and with some of them the Council had great trouble. One that should have been finished in nine months took four years to complete, and five contractors out of thirty failed to do their work. The most unsatisfactory jobs the Committee had to undertake were painting jobs, which they could not do at the price of the lowest tenders. The amount of the highest tender for that class of work was usually four times as much as the lowest. How could they deal with the question of cost unless they considered the quality?

Alderman Taylor said the Works Department had laboured under very great difficulties. Profits were shown in the case of the Shoreditch and Kingsland Fire Stations, but what was the result? When they had to build another fire station, down came the estimate 1d. a foot. Again, they showed a profit of 20 per cent. in the construction of a sewer, whereupon in the case of the next sewer the architect's estimate came down 20 per cent.

Sir John Lubbock said that last week he stated that before the Works Committee came into existence the contractors had done the Council's work 6 per cent. below the estimates of the Council's officials. He had written to the architect asking whether that statement was correct, and the architect had replied as follows:—"Dear Sir John,—Your statement was quite correct as to the works done for the Council before the establishment of the Works Committee, so far as I have traced them, the cost being at least 6 per cent. on the average below my estimates. I see no reason to doubt that had the works continued to be put out to contract they would have shown similar results." Were he to treat the matter from a Party point of view, he should be inclined to say, "Give the Works Committee rope enough," for he believed that London would become so indignant with the system that those who supported it would be swept away at the next election. But they had to consider the matter from the point of view of the interests of the people of London. He deprecated the amendment as calculated to cause delay and expense.

Mr. Roberts appealed to Mr. Costelloe to withdraw his amendment. It was necessary on that matter that they should be perfectly unanimous, and he thought there was no reason for going on with the discussion in view of the Chairman's ruling.

Mr. Dickinson suggested, on the contrary, that Lord Onslow should accept Mr. Costelloe's amendment, which would secure comparison of the work the Committee had done with that done by contractors.

Mr. John Burns, M.P., said he saw no reason why, if management involved quality, they should not admit the word into the motion. He denied that the Labour members desired to burke inquiry, but they wished it to be wide enough to take in all that concerned the question, and have expert evidence from the School Board, the City Corporation, and the like. They should also ascertain whether transfers did not take place in other Departments of the Council. They should also have evidence from the incriminated employés as to the reasons which led them to commit the technical offence of which they had been guilty. Criticising various speeches, Mr. Burns pointed out that on the Kingsland and Shoreditch fire stations, and Cable-street dwellings, the Department carried out the work at a profit of over 1,000*l.* He wanted the Committee to inquire whether any Councillor ever prevented the progress of any of the works of the Council. Referring to Mr. Emden, a councillor, he alleged that that gentleman had suggested that a certain artificial stone should be used on a particular job, at the same time that Mr. Emden was financially interested in an Artificial Stone Company.

Mr. Emden said that he withdrew from the company two years ago, not taking the profits of the last year, in order to prevent it being said that he had profited by his position in the Council.

The discussion on the amendment was then closured, and the Council divided:—For the amendment, 51; against, 56.

Mr. Cohen, M.P., moved that after the words "thereon" in the resolution, the words "not precluding any inquiry into the quality of the work as done by the Committee and contractors" should be inserted.

Mr. T. M'Kinnon Wood seconded, and the amendment was agreed to.

The first part of Lord Onslow's resolution was then accepted without a division, and the following members were subsequently elected to serve on the Committee:—Mr. Dickinson, Dr. Longstaff, Sir Godfrey Lushington, Mr. Torrance, Mr. Davies, Mr. Fletcher, with the Chairman, Vice-Chairman, and Deputy-Chairman of the Council. It was also agreed to publish the shorthand notes of the inquiry.

The Chairman said that in consequence of the resolution of the Council he would accept the office of Chairman of the Committee, and to expedite the matter he proposed calling a meeting for eleven o'clock on the following morning.

Proposed New Theatres.—The Theatres and Music-halls Committee reported as follows:—

"We have considered eleven drawings, dated November 5, 1896, submitted on behalf of Mr. F. W. Purcell, showing a theatre, to be called the Alexandra Theatre, which it is proposed to erect on a site situated on the west site of Stoke Newington-road, between Princess May-road and Wiesbaden-road. The Council's regulations as to site are fully complied with. Seating accommodation will be provided for 2,005 persons. In the construction and arrangement of the theatre all the regulations of the Council are shown to be complied with, but the sanction of the Building Act Committee will have to be obtained to the erection of a glass and iron shelter or covered way over the principal entrances fronting Stoke Newington-road. We recommend—'That the eleven drawings, dated November 5, 1896, be approved, on the following conditions: That the sanction of the Building Act Committee be obtained to the erection of the glass and iron shelter or covered way over the principal entrances fronting Stoke Newington-road. That the works be commenced within six months, and be carried out in all respects in accordance with the Council's regulations and the provisions of the London Building Act, 1894. And that upon our reporting the completion of the building in accordance with the approved drawings and the above conditions, a certificate under the Metropolis Management and Building Acts Amendment Act, 1878, be sealed and issued to the owner.'"

The recommendations of the committee were agreed to without comment.

The Theatres and Music-halls Committee further reported:—

"We have considered nine drawings, dated November 12, 1896, submitted on behalf of Messrs. Hardie, Von Leer, & Gordyn, showing the manner in which it is proposed to erect a theatre, to be called the Regent Theatre, in the New Cross-road, Deptford. The arrangement of the building itself is satisfactory. The site has a frontage of 64 ft. to the New Cross-road and about 177 ft. to Watson-street, which is at present only 20 ft. wide. The applicants propose to make this street 30 ft. wide in front of the theatre by setting back the building about 10 ft. The site, however, will not even then comply with the Council's regulations, inasmuch as Watson-street will be considerably less than 30 ft. wide for its remaining length, and will at its north end terminate in a narrow footway passing under a house. We recommend that the nine drawings, dated November 12, 1896, be not approved."

The recommendation was agreed to without comment.

The Council adjourned shortly before 8 o'clock.

Illustrations.

DOMINICAN PRIORY, HAWKESYARD.

THE building stands on high ground in a beautiful park near Rugeley, Staffordshire, and was designed to be built in Penkridge stone and covered with red tiles.

The west wing, containing community room and kitchens, is about to be built, and the chapel with its dependencies is in hand.

With the exception of the hammer-beam roof of the chapel, the fan vaulting of the chantries—once containing the founder's tomb—and the forty-four canopied stalls, the whole of the work is very simple and plain in treatment.

The organ, which originally came from Eton and has a very good case of eighteenth century workmanship (mentioned in Hill's book on Organs), is to be rearranged, and will be built on corbels against the choir wall.

The architect is Mr. E. Goldie, of London, and the contractors Messrs. J. Parnell and Son, of Rugby.

PROPOSED NEW EMMANUEL CHURCH, ST. THOMAS, EXETER.

WE give the complete drawings of the selected design for this church, by Mr. Harold Brakspear. It will be remembered that this was the church competition which attracted such a large and we may almost say unprecedented number of competitors (440), and also that there was a complaint made that only a selection of the designs were submitted to the assessor; a complaint which was perfectly reasonable, though we do not wish to make any suggestion that the result of the competition would in that case have been different; only the main body of competitors would have felt that they had been fairly treated.

The following extracts from the report sent by the architect along with the drawings will sufficiently explain the intention of the design:—

"The plan of the church consists of chancel, with organ and heating chamber on the north side.

Side chapel (which may be used if considered advisable as a morning chapel), and vestries on the south, nave with north and south aisles and slightly projecting transept, south-west tower and a porch on the north.

In accordance with your instructions provision has been made for further extension by the addition of a second aisle on the north, which when built would accommodate about 200 persons.

It is proposed to construct the wall next this addition as shown, so that, should the addition be carried out, the walling and windows between the arches could be removed, leaving the arches as the arcade of the new aisle, and the porch, being of timber, could easily be removed to the new position.

The style selected, as being in the author's opinion the most suitable for modern requirements, is an adoption of that in vogue in this country at the commencement of the fifteenth century.

The walls are to be built solid and faced between the dressings with Babbicombe stone built in rough rubble in irregular beds and joints and quarry fractured face.

The dressings inside and outside to be of best Ham Hill stone laid on its natural bed and finished coursed dragged.

The various thicknesses of the walls shown and figured are in all cases in accordance with the regulations.

The core of all piers and spandrels of arches to be formed of hard burnt stock bricks laid in English bond and carried up with the masonry.

The whole inside surfaces of the walls between the dressings are to be plastered and finished trowelled stucco for colouring.

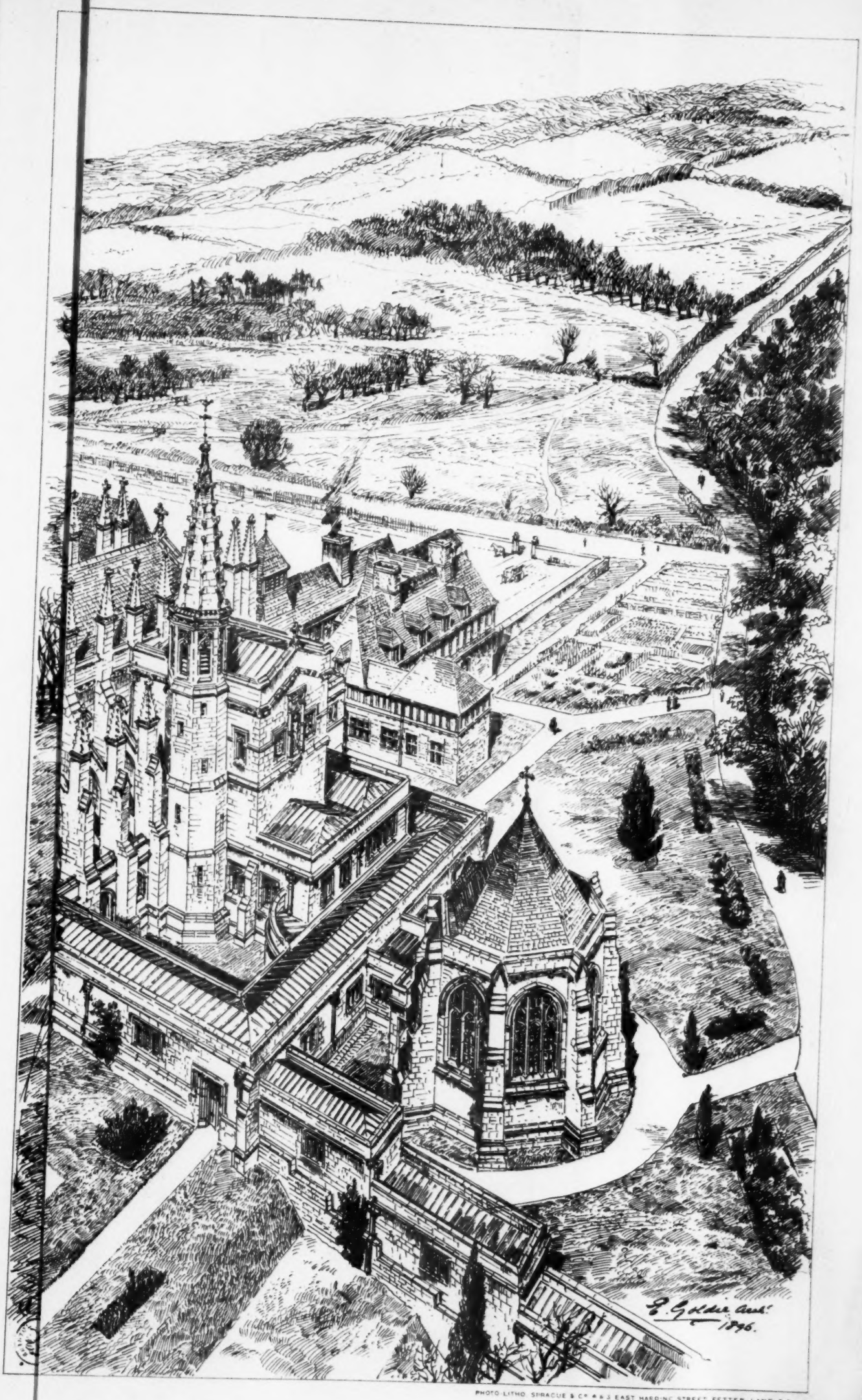
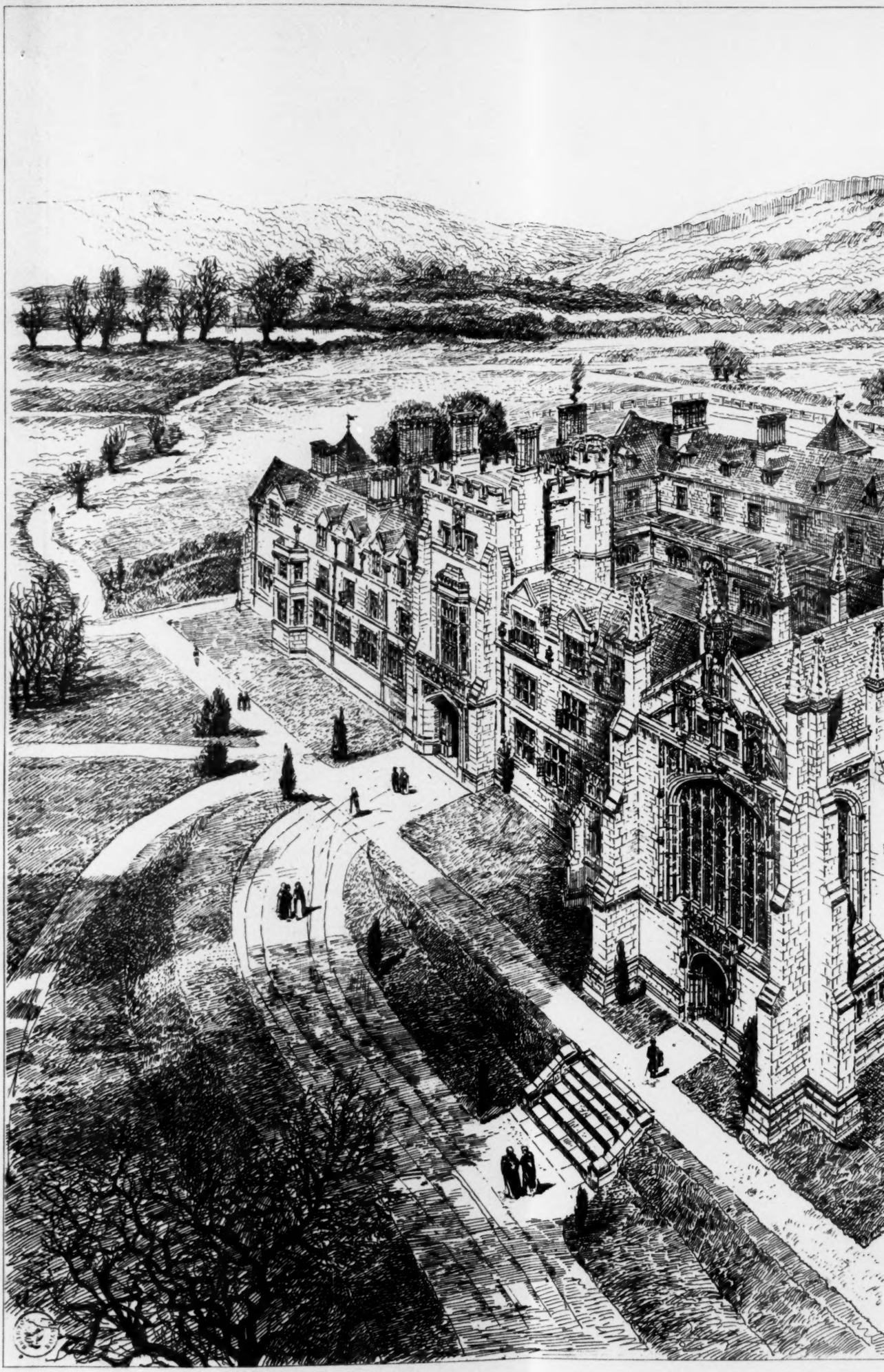
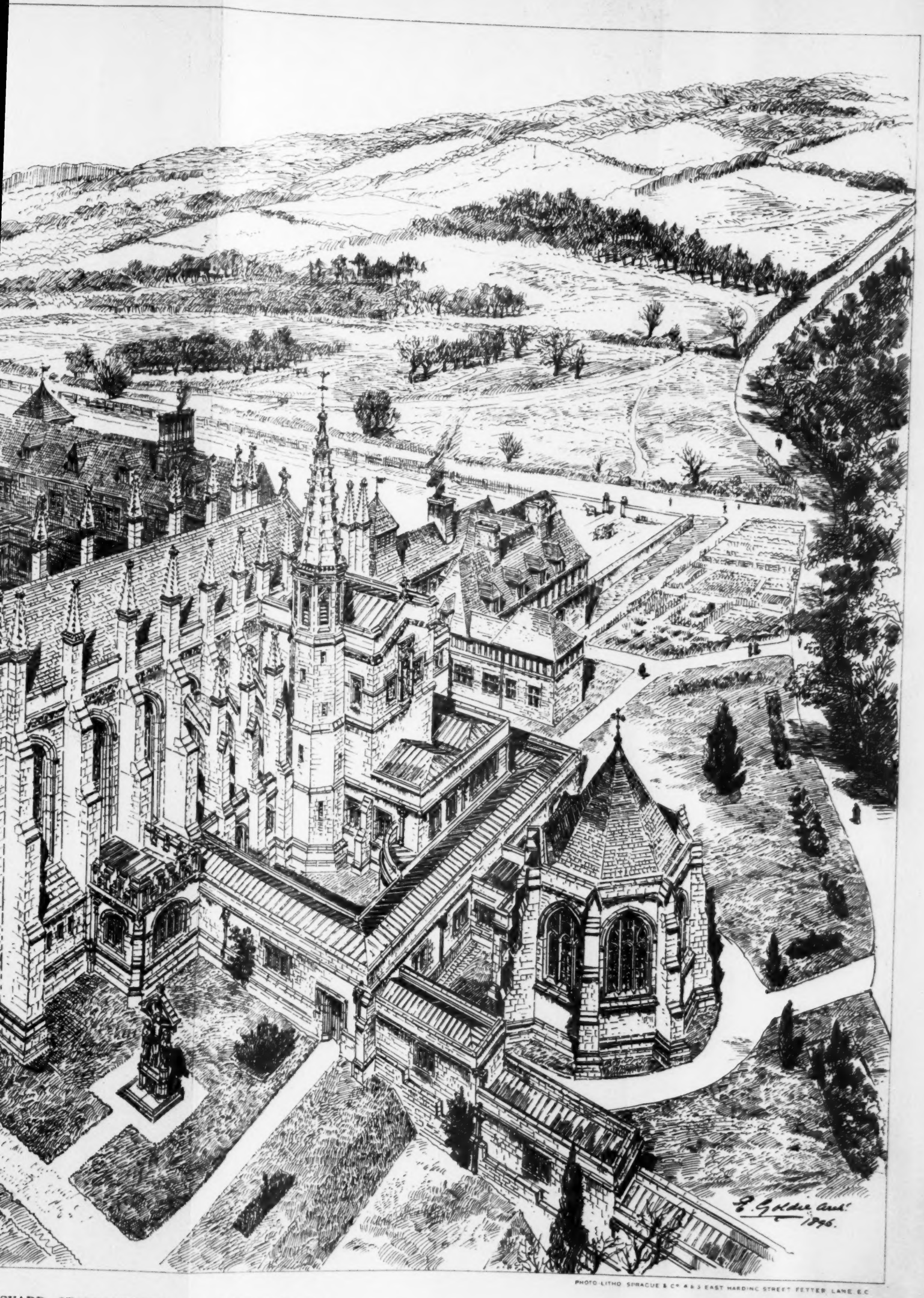


PHOTO-LITHO. SPRAGUE & Co. 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

MR. E. GOLDIE, ARCHITECT.



DOMINICAN PRIORY, HAWKESYARD, S



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SYARD, STAFFORDSHIRE.—Mr. E. Goldie, Architect.

Proposed new

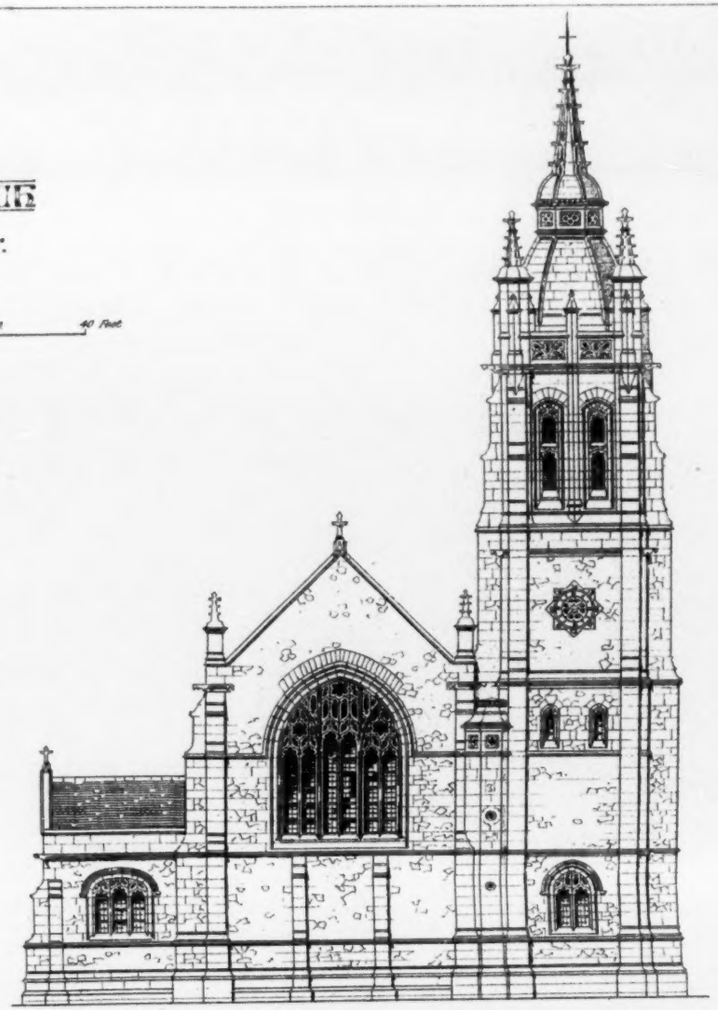
EMMANUEL CHURCH

St Thomas Exeter

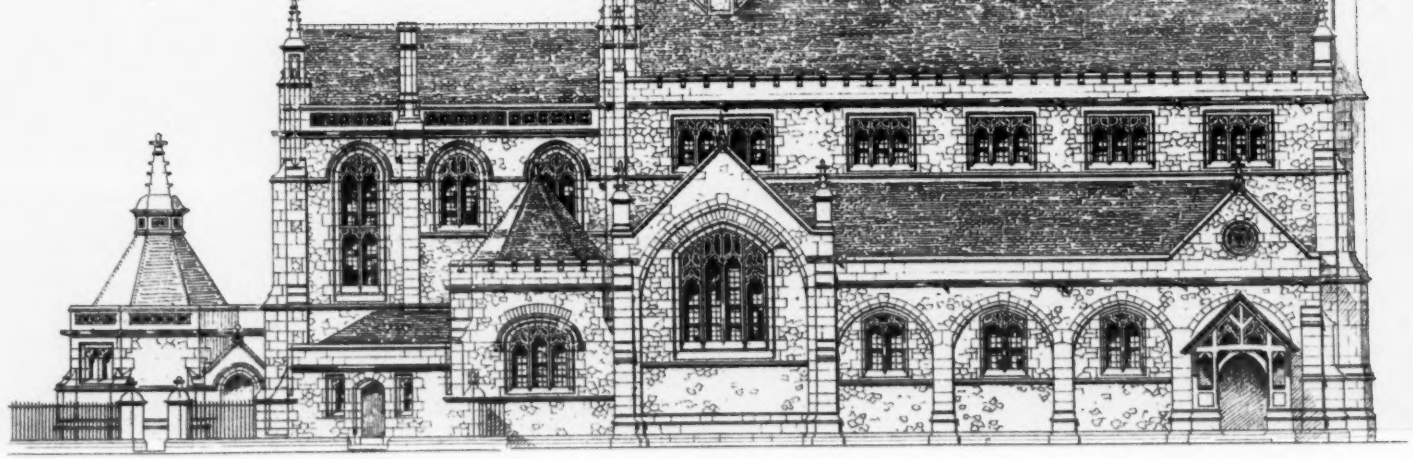
SCALE

10 5 0 10 20 30 40 Feet

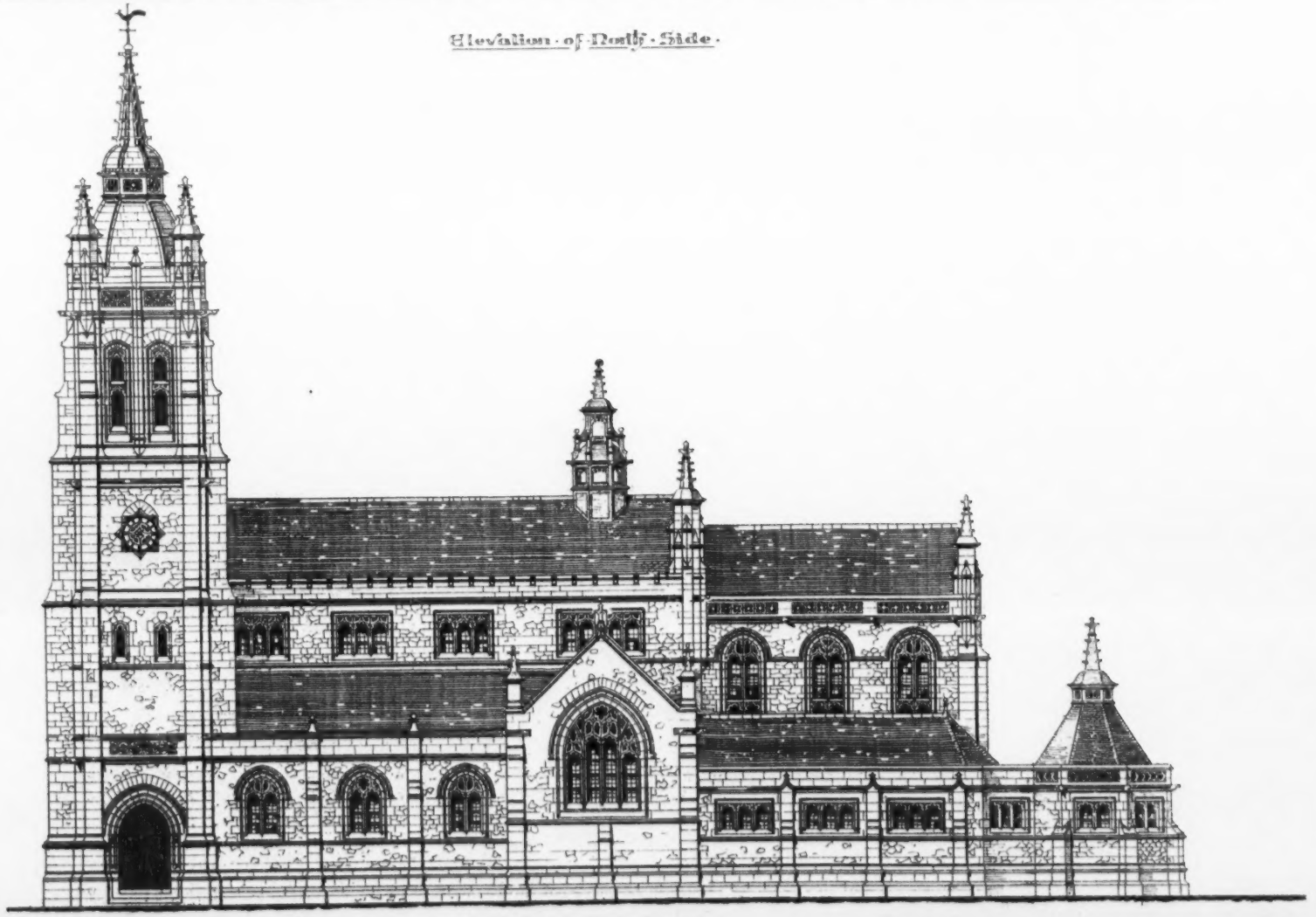
East Elevation.



West Elevation.



Elevation of North Side



Elevation of South Side

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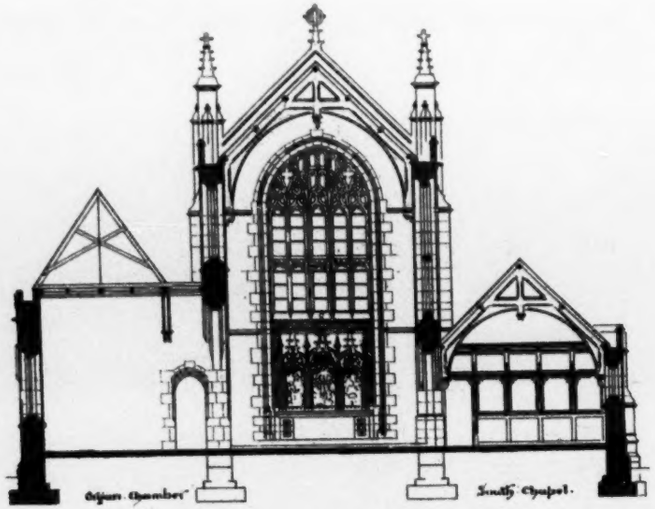
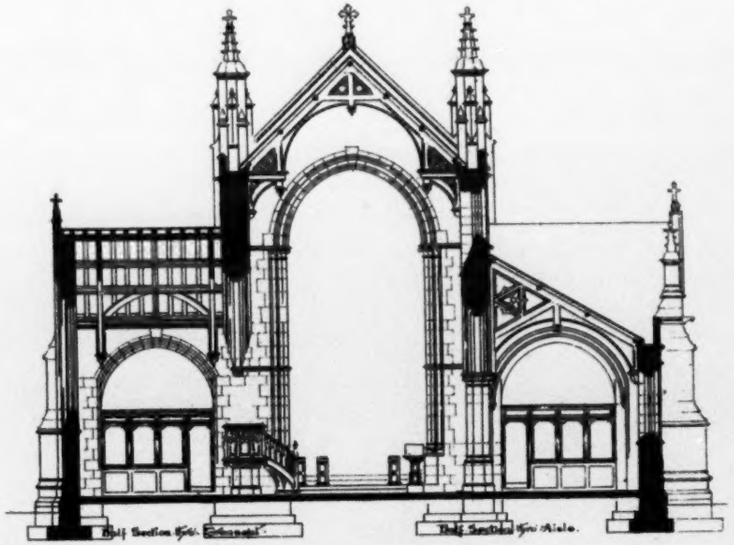
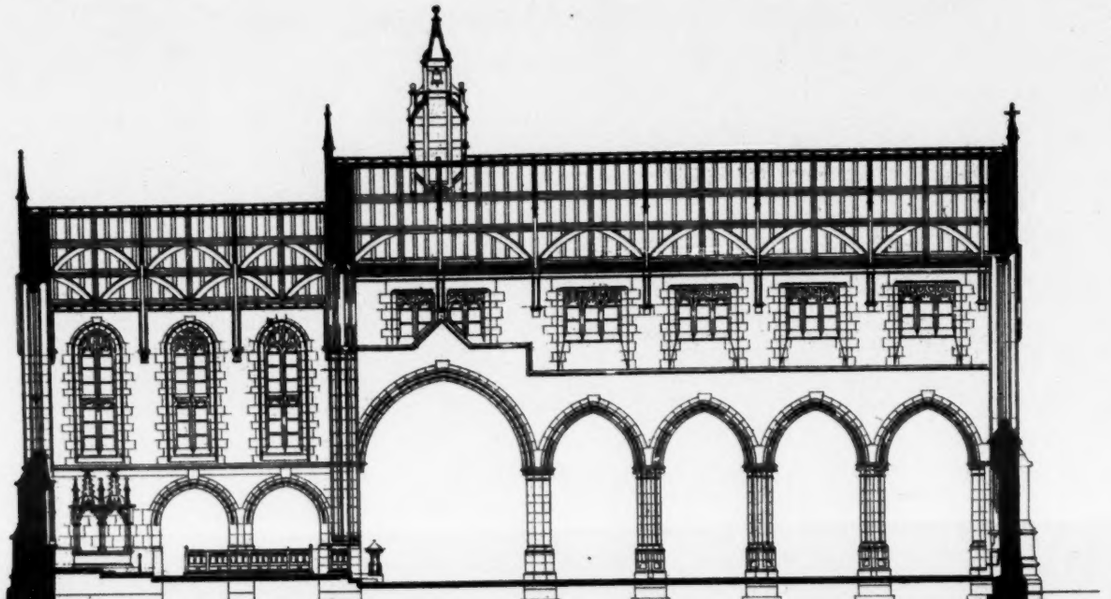
SELECTED DESIGN IN COMPETITION FOR NEW EMMANUEL CHURCH, ST. THOMAS, EXETER.—Mr. Harold Brakspear, A.R.I.B.A., Architect.

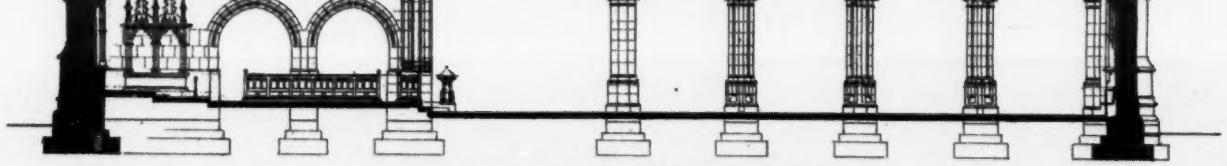


Cross Section of Chancel looking East.



Cross Section of Nave looking East.





Longitudinal Section looking South

Proposed new EMMANUEL CHURCH
St Thomas Exeter

Accommodation in

Nave	272
North aisle	149
South aisle	119
South Chapel	60
Chancel	34
Total	634

Parish Schools

Porch

Organ Chamber

Vestry Chamber

Choir Vestry

Clergy Vestry

Sedilia

Credence

Font

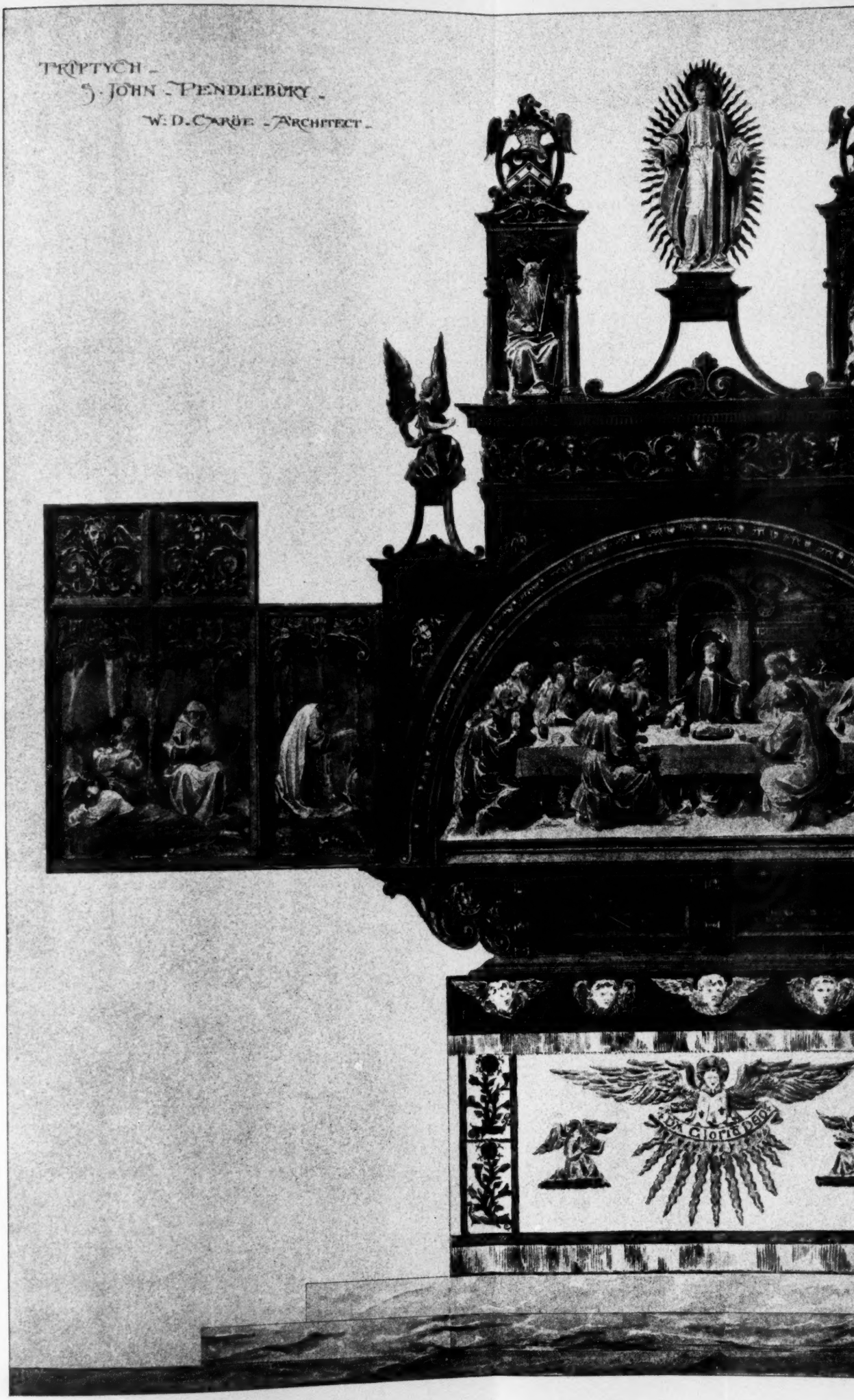
Desk

Scale

PHOTO-LITHO. SIRAGUE & Co. 4 & 5 EAST HARDING STREET FETTER LANE, E.C.

SELECTED DESIGN IN COMPETITION FOR NEW EMMANUEL CHURCH, ST. THOMAS, EXETER.—Mr. Harold Brakspear, A.R.I.B.A., Architect.

TRIPTYCH -
S. JOHN - PENDLEBURY -
W. D. CARÖE - ARCHITECT -



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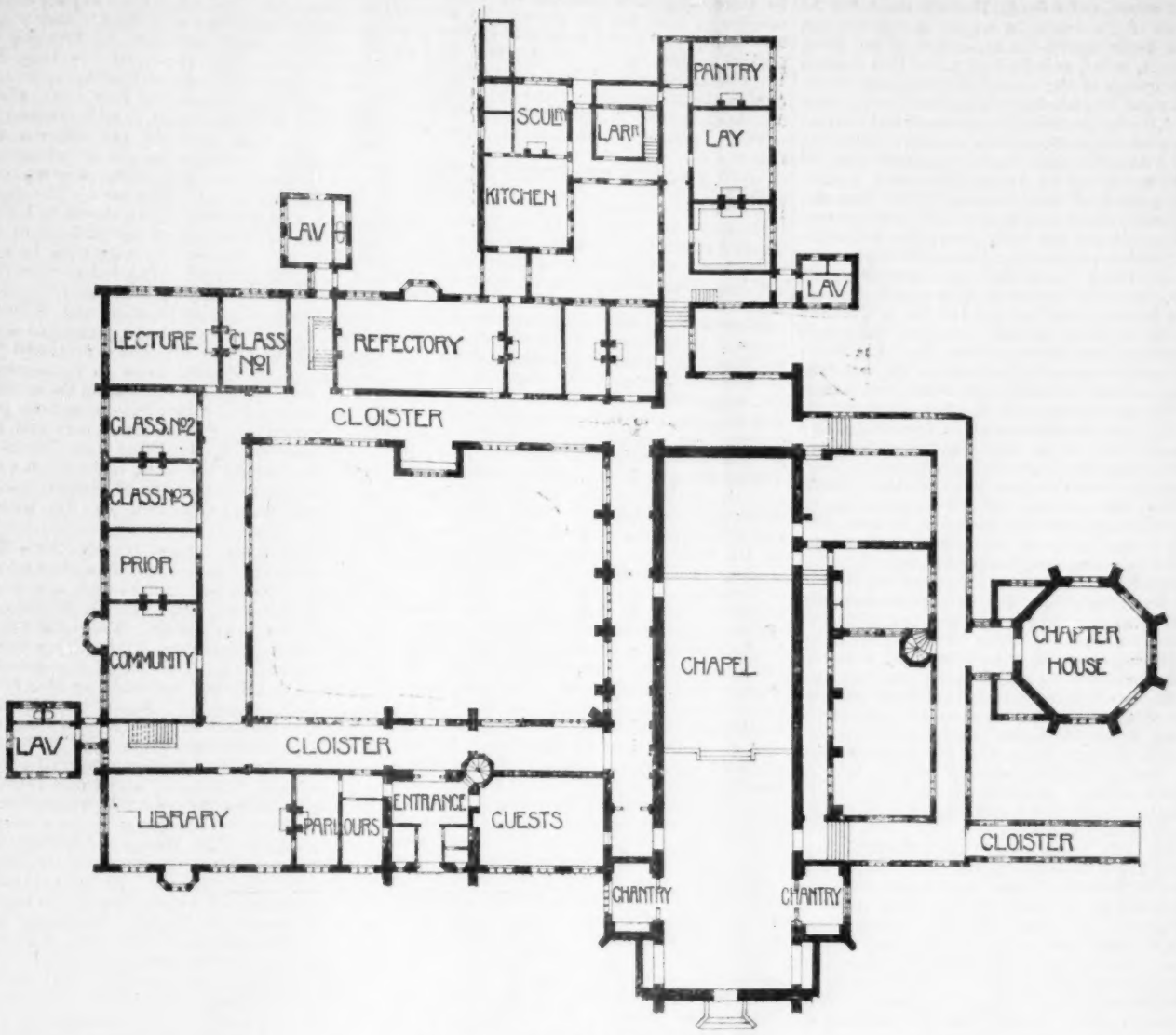

Dominican Priory, Hawkesyard. Plan.

The whole of the floors to be laid with wood blocks of red deal, under all seating areas, and oak in the passages (this is recommended as more noiseless than tiles).

The space within the Communion rails to be laid with encaustic and plain tiles in approved design.

All aisle windows to have air inlet flues in the cills, with adjustable valves, and protected externally by ornamental terra-cotta air bricks about 2 ft. from the ground.

The thorough extraction of foul air is arranged for in the turret over the east bay of the nave, which is formed into an exhaust ventilator, on Boyle's approved system, with a turret over for the accommodation of a small bell, which will be required until the tower shall be built.

The heating chamber is arranged partly below the level, but with the entrance above the floor line.

The heating is to be by hot-water pipes carried in channels under the floors and a radiating coil in each vestry.

The plan is arranged so that the chancel, organ chamber, south chapel, and vestries may be proceeded with at once as the first section.

The temporary organ and choir could be accommodated in the choir vestry and the chancel, organ chamber and side chapel furnished with chairs for the congregation, seating about 150 persons.

The clergy could be temporarily accommodated within the Communion rail.

The estimated cost of this section, including temporary walls across chancel and side arches would come to not more than 2,000*l.*

If the accommodation in this section is not considered sufficient, the present iron church could be re-erected westward of new chancel, so giving as much accommodation as at present, with the extra 150 in the new building.

The next section built should be the nave, with south aisle and transept, which would cost 3,000*l.*

The north aisle will cost about 700*l.*, making the total cost 5,700*l.*, not including, as stated in your requirements, the tower (above the parapet of the aisle) heating, lighting, or seating."

TRIPTYCH, ST. JOHN'S, PENDLEBURY.

The Triptych illustrated has been recently erected in St. John's Parish Church, Pendlebury, near Manchester, to the memory of the late John Knowles, D.L., and Mrs. Knowles, by their son, Mr. Lees Knowles, M.P., D.L. It is executed in oak, the centre panel being in gesso. The architectural setting is gilded, and the panels are in oil colour on a stamped gold ground. The subjects speak for themselves.

The work was executed by Mr. W. Frith, of Chelsea; the painting by Messrs. Clayton & Bell. The design is by Mr. W. D. Caröe.

COMPETITIONS.

Pupil Teachers' Centre, Sheffield.—At a monthly meeting of the Sheffield School Board, held on the 19th inst., a report on the plans obtained in competition for the proposed new pupil-teachers' centre and peripatetic science department on the site in Holly-street and Orchard-lane, was presented by the Building Committee. The Committee recommended that the plans marked "Spes" be accepted and adopted, and that premiums of 15*l.* and 10*l.* be awarded to the authors of plans marked "Tressure Fleury" and "1896" respectively, their plans being placed second and third in order of merit. An amendment to adopt the "1896" plans having been rejected, the minutes were adopted. The successful plans were those of Mr. H. W. Lockwood. Those placed second were by Messrs. Holmes & Watson, and third by Mr. Norton.

School Infirmary Buildings, Farnham.—In the recent competition for a school infirmary, fort he Board of Management of the Farnham and Hartley Wintney District Schools, the first premiated design was by Mr. Archibald Ansell, Woking, Surrey.

Schools, Llanfair.—The result of the competition for the best set of plans for the new schools at Llanfair has just been made known. Six architects competed, and the plans adjudged the best were those designed by Mr. Frank H. Shayler, architect, of Oswestry and Welshpool. The school is designed to accommodate 100 scholars. The plan provides an assembly hall and school room, class-rooms, kitchen, and laundry, cloak rooms, &c.

Workhouse, Nottingham.—The competition for the new workhouse at Nottingham has just been decided. The first premiated design is by Messrs. Marshall & Turner; the second is by Messrs. Sutton & Sutton; and the third is by Messrs. Brewill & Baily.

ARCHITECTURAL SOCIETIES.

The Architectural Association Discussion Section.—The third meeting of this Section of the Architectural Association took place at 56, Great Marlborough-street on the 18th inst., when, failing a joint meeting with the Architectural Association Camera Club which had fallen through, Mr. Wm. Bonner Hopkins read a short paper on the question, "Is Originality in Architectural and other Design Desirable?" Starting from a remark of a well-known architect that "Originality is the curse of art," the reader endeavoured to show that such a statement is not necessarily true, instancing the fact, now pretty well agreed upon, that all revivals of the forms of long past styles of design have been found to be unsatisfactory, even though the works may be

most correct and refined. He maintained that the reason of this was to be sought in the fact that such works lacked the expression of any living thought, belief, or individuality, and that it was in consequence of the want of such animating breath of life that they failed to satisfy; that if, on the other hand, the designer added to the careful and reverent study of old work and its motives a wide sympathy with the aspirations of the present time and a keen outlook for its conditions and requirements, his work would sooner or later show that originality which must be the outcome of new conditions and new and living ideas; that indications that such a quickening spirit is entering into the designs of the present day were not wanting, and that, though necessarily changes must first appear only in details, he believed that the next century would infallibly see that new and living style which has been the despair of this. The reader then asked the meeting to consider the vast difference between the beliefs, knowledge, and manner of life of the men who designed in those great styles, in the imitation of which we have spent the greater part of this century, and the beliefs, knowledge, and manner of life of ourselves. Was it not then true that these latter would inevitably receive their outward formal expression in new and original design? In conclusion, he maintained that design owing its originality to such a cause was better, even though crude and imperfect, than design confined to the most correct and refined, but dead, imitation of the forms which had been the outward expression of long past ideas.—A discussion followed, which tended to show that originality as an end in itself was not desirable, and emphasised the fact that what was necessary to the improvement of the arts of design was that the designer should, to a careful study of old work, bring the highest intellectual cultivation capable of being attained at the period in which he lives.—The next meeting will be held on December 2, at seven p.m., when Mr. A. E. Henderson will read a paper on "The Byzantine Spirit in Italy and Sicily."

EDINBURGH ARCHITECTURAL SOCIETY.—At a meeting of the Edinburgh Architectural Society, held in Dowell's Rooms on the 18th inst.—the President in the chair—Mr. A. M'Rae delivered a paper on "Hospital Planning," confining himself to hints on important principles, and on portions of the buildings. A discussion followed.

GLASGOW ARCHITECTURAL ASSOCIATION.—At a meeting of the Glasgow Architectural Association, held on the 17th inst., Mr. Andrew R. Scott, President, Edinburgh Architectural Society, delivered a lecture entitled "The Grammar of English Gothic Architecture." The lecturer opened his subject by pointing out that, excepting men like Scott, Bodley, Pearson, and Bentley, the modern architect fell far short of his mediæval predecessor, by failing to grasp the spirit of artistic and constructional truth, which was the beauty of Gothic. Mr. Scott then impressed on his audience the necessity for close and systematic study of the development of the mouldings as a key to their comprehension and the age of the buildings they adorn. Referring to measuring old work, he preferred the simplest mode as the best—foot-rule and plumb-line, always plotting out details full size on the spot when practicable. The lecturer then proceeded with a most exhaustive analysis of the development of Gothic mouldings, copiously illustrated by full-size drawings, closing his remarks by condemning the use of compasses for drawing Gothic forms as contrary to the usages of the mediæval artist, and productive of that stiff, cast-iron appearance which was the result of all mechanical precision, and the bane of Modern Gothic.

CARLISLE ARCHITECTURAL, ENGINEERING, AND SURVEYING SOCIETY.—The ordinary meeting of this society was held on Tuesday evening last, when Mr. Claud Lonsdale delivered a lecture on "Timber." The lecturer commenced by first describing the life history of an oak by way of illustrating the growth and development of trees. Their structure and progress were fully described, from the germination of the acorn to the wrought timber. The different varieties of oak were described, and their several characteristics, that known as "Turkish" being the most worthless. The best of oak is not the hardest, heaviest, most supple, or toughest of woods, but it combines these qualities to a remarkable degree, so as to assume an average composition which fits it best for most constructive purposes. The felling and seasoning of timber were fully described, and it was stated that all timber should lie in the log for from six months to two years before being cut up. After the oak, a list comprising all the main varieties of trees was described, their characteristics being illustrated by three samples of each variety. The three samples of each tree are necessary to show its true quality, and should be taken—one (the cross section) at right-angles to the length of the log; one (the radial section) from the centre of the tree to the circumference; and the other (the tangential section) at right-angles to the radial section. About 400 samples of wood were shown.

ARCHÆOLOGICAL SOCIETIES.

BRITISH ARCHÆOLOGICAL ASSOCIATION.—The first meeting of the session 1896-97 was held at the rooms in Sackville-street, Piccadilly, on the 4th inst. Mr. Thomas Blashill, hon. treasurer in the chair. Mr. Oliver exhibited some good specimens of old Battersea enamel ware in the shape of a candlestick of graceful form, and a puff-box. Dr. Winstone exhibited a horse shoe of unusual form and size found in Essex in the neighbourhood of Theydon Bois, which was considered to belong to the seventeenth century. An interesting paper on the "Guild of the Clothworkers of Newbury" by Mr. Walter Money, F.S.A., was read, in the author's absence, by Dr. Birch, hon. sec. A short paper, descriptive of the site and surroundings of the Roman city of Verulamium, was read by Dr. Winstone. The second meeting of the session was held at the rooms of the Association, on Wednesday, the 18th inst. Mr. C. H. Compton, V.P., in the chair. Miss Turner exhibited a perfect example of an early Christian lamp of terra-cotta, bearing the sacred emblem of a fish. The lamp was found at Rome. Mr. Patrick, hon. sec., showed some early Anglo-Saxon coins, one of which was found in the churchyard of Hexham, in Northumberland, and is of the time of Ethelred. He also exhibited a fine portrait medal in bronze of Queen Caroline, wife of George IV., issued in 1820. In the author's absence, Mr. Patrick read a paper by Dr. Fryer on "Christian Emblems found at Trier." These emblems and inscriptions were cut on small marble or stone slabs, which were originally let into the lids of stone coffins. In many instances the baptismal name is given, and the sacred symbol employed is placed either above or below the inscription, which is usually either "hic iacet" or "hic iacet in pace." These inscriptions mostly date from the end of the fourth and early part of the fifth centuries. The Rev. J. Cave-Browne, Mr. Blashill, who had visited Trier recently, and the Rev. J. H. Dukinfield Astley took part in the discussion which followed the paper.

THE NATIONAL TRUST.—A meeting of the Executive Committee of the "National Trust for Places of Historic Interest or Natural Beauty" was held at 1, Great College-street on Tuesday evening. Sir Robert Hunter presided. It was announced that the whole of the purchase money for Barras Headland had been received, but that only 160*l.* had been obtained for the preservation of the old pre-Reformation Clergy House at Alfriston out of the 350*l.* appealed for. Mr. A. Powell, the architect, reported that unless further funds were forthcoming within a week, the work of repair would have to be suspended, to the imminent danger of the fabric. Sir Robert Hunter and Canon Rawnsley were nominated to represent the Trust upon the Committee elected by the London County Council to consider the possibility of scheduling and preserving the historic buildings of London. The resignation of the Secretary, Mr. Lawrence W. Chubb, who has been appointed Secretary of the Commons Preservation Society, was accepted, and a vote of thanks to Mr. Chubb for his indefatigable efforts in the Trust's work was passed. Mr. A. M. Poynter (son of the President of the Royal Academy) was elected Secretary in his place. The proposed demolition of the Herber Tower, at Newcastle, to make room for a bakery was brought before the notice of the Trust and it was decided to appeal to the Corporation of Newcastle and to the Armourers' Company of Newcastle to do their best to retain this interesting tower upon the western walls of the northern city.

ROYAL SOCIETY OF LITERATURE.—On Wednesday, the 25th inst., the opening lecture of the session was delivered by Dr. Phené (Vice-President). Mr. James Curtis, F.S.A., presided, in the unavoidable absence of the President (the Lord Chancellor). The subject was the transportation of their sacred trees by the Greek and Asiatic colonists in their migration to Western Europe. The daphnephoria was, of course, a local ceremony along the sacred way from Delphi to Tempe. The importation and the planting of the sacred olive by Athenâ in the Erectheum was also apparently local; but the colonists carried the vine and other trees with them to their places of settlement, and instituted the Dionysia in Greece, known as the Bacchanalia in Italy, &c. Certain tribes mentioned by Herodotus, Strabo, &c., were traced as carrying fruit trees, which were found to accompany the Bacchic ceremonies, and reasons were given for assuming that the ceremonies of the Ambrosia, one of the festivals of the Dionysia, were those which accompanied the life-giving food of the fruit-trees. The growing trees were conveyed in pots, shown by Indian sculptures and the name of the third day of the Dionysia, χότρος (a pot), from the trees in pots and vases then offered. The fruits of certain trees, described as apples, were mythologically the food of the gods of Olympus and of Scandinavia, &c. These fruit-bearing trees and ceremonies were traced to Western Europe, and the Councils of the Church down to the eleventh century were occupied in suppressing the worship of these trees. The author had found from personal travel the fruits of these trees and the people mentioned by Herodotus from Britain to India, by a course *viâ* Italy, Greece, &c.; the names of the fruits in some of the settlements being still those mentioned by the ancient writers.

GLASGOW ARCHÆOLOGICAL SOCIETY.—The fortieth annual meeting of the Glasgow Archæological Society was held in the rooms, 207, Bath-street, on the 19th inst. Dr. David Murray, President, occupied the chair. The report by the Council on the transactions of the Society during last session was read. The Council recorded with satisfaction that the proposal made by Mr. F. T. Barrett in his paper on "Local Place-Names," available for the civic wards of Glasgow, had to a considerable extent been given effect to in the selection of names for the new municipal wards. Steps had also been taken which might lead to an arrangement for the effectual preservation of some of the most interesting sections of the Antonine Wall. Mr. George J. Walker was elected Honorary Treasurer in room of Mr. James Marwick, who had filled the office for ten years. The President moved the adoption of the report, which was seconded by Mr. Honeyman and agreed to. The Treasurer's statement, which was of a satisfactory nature, was also adopted. Mr. George Neilson, F.S.A. (Scotland), then read a paper on "Annals of the Solway."

HISTORIC SOCIETY OF LANCASHIRE AND CHESHIRE.—A meeting of this Society took place recently, Mr. Charles Potter presiding. Mr. J. A. Waite read a paper on the "Lesser Halls of Lancashire at the End of the Sixteenth and the Early Part of the Seventeenth Century," and commenced by giving a brief account of how so many large estates belonging to the old nobles came to be broken up, and afterwards came into the hands of the commoners after the Wars of the Roses, and how the greatly increased prosperity of the time of Queen Elizabeth brought with it a corresponding increase of comfort and luxury, and was the cause of so much building and rebuilding taking place at this period. A brief sketch of life and living, and the state of the country at this period was also given, as well as an account of the architectural features and construction of the different classes of halls in various parts of Lancashire. Four typical examples of the different styles of building were given in detail, and illustrated by a series of enlarged views, and a number of photographs of old Lancashire halls were passed round for inspection by the members. At the close of the paper a discussion took place, and a vote of thanks was accorded.

ENGINEERING SOCIETIES.

THE INSTITUTION OF CIVIL ENGINEERS.—At the ordinary meeting of this Institution on the 24th inst., Mr. J. Wolfe Barry, C.B., F.R.S., the President, in the chair, a paper on "The Bacterial Purification of Water," by Dr. Percy Frankland, F.R.S., was read. The author dealt with the more important advances in the subject since he brought it before the Institution ten years ago. In the consideration of bacterial purification by natural processes, the so-called "self-purification" of river-water was discussed in so far as the spontaneous disappearance of bacteria in running water was concerned. Several special instances of stream-purification were referred to, and the relative importance of the factors concerned in the process, such as sedimentation, action of light, algæ and chemical oxidation, temperature and movement, was taken

into account. The removal of bacteria during the natural filtration of water through porous strata was exemplified by the contrast, as regards bacterial contents, exhibited between surface and deep-well waters. The latter part of the paper was devoted to bacterial purification by artificial processes, and under this head the purification of public water supplies by means of sand-filtration was considered. In the first place, the importance of a preliminary purification of the unfiltered water by storage in reservoirs was pointed out. Not only did the coarser particles in suspension become deposited during storage, but a large number of the bacteria present also succumbed to sedimentation. This important fact had been first demonstrated by the author in 1885 in the course of numerous experiments he had made on the removal of micro-organisms from water. More recently he had studied the bacterial value of sedimentation on a practical scale at the reservoirs of the London Water Companies. The rate at which sand-filtration was carried on was then discussed, and the practice in this respect at several of the more important waterworks was indicated. The necessity of slow and uniform filtration was insisted upon if satisfactory results were to be secured. The depth of the fine sand to be employed in filters was then discussed, and experiments were cited showing the advantages to be derived from the use of a thick layer of the material. Attention was also directed to the size of the sand-grains employed and the effect of this factor upon the bacterial quality of the filtrate; and the results of mechanical analyses of sands derived from filter-works in different parts of Europe were given. The filtering power of the surface-layer of slime was referred to, and its incapacity, if unaided, of yielding a satisfactory filtrate was pointed out, experiments being quoted to show the further removal of bacteria in the subjacent layers of fine sand. The effect on the quality of the filtrate of cleaning the filters was also pointed out. After referring to experiments made in America on the intermittent filtration of potable water through sand, and to actual practice at the Chemnitz waterworks in Germany, the author drew attention to the grave disturbances in the efficiency of sand-filtration which he had found to occur occasionally in frosty weather. The results of the author's past examination of the London water supply for the Local Government Board were shown in a diagram, in which the marked rise in the bacterial contents of the filtered water strikingly corresponded with the fall in the temperature to the vicinity of freezing-point. The difficulty of guarding against the deterioration of the effluent during such times was one of the principal problems which engineers had to face in this country, where it was not customary to cover the filter-beds. The importance of guarding against these disturbances, occurring as they did just when surface-waters were generally in their worst condition, and stood in most need of efficient filtration, was strongly emphasised. The author reproduced, in an appendix, the regulations issued by the German Government in regard to the filtration of surface-waters used for public water supplies, showing how far behindhand was English practice in submitting the purification of the public water supplies to the systematic control of bacteriological examination.

Correspondence.

To the Editor of THE BUILDER.

PRICED BILLS OF QUANTITIES.

SIR,—Relative to your opinion based on an architect's question as regards priced bills of quantities, as quoted in your issue of the 21st, I take it that the architect represents not only the building owner but also the contractor. He is the arbitrator between both; and if so important a document as a priced bill of quantities be lodged in his hands by the contractor, it can only be given up to the building owner by the contractor's consent.

Pricing a bill properly requires a large amount of skill and long experience, and I know that contractors resent strongly such information being treated otherwise than as confidential. I know of a case where the bill found its way to the client, who, in turn, handed it to the clerk of the works, and it lay more or less publicly on his office table.

W. H. HILL.

*** It does not follow that because the client made a wrong use of the priced bills the architect was wrong in confiding them to him. It is the client who pays, and he is entitled to the information on which the architect directs him to pay.—ED.

IRON SET IN CEMENT.

SIR,—Would some of your correspondents give their experience as to whether wrought iron, when set in Portland cement, is less likely to oxydise than when set in lead or otherwise. Finials and railings, when set in lead, often show very rusty results.

"ENQUIRER."

The Student's Column.

RURAL DRAINAGE.—XXII.

ONE of the most frequently adopted processes of sewage treatment is that known as the "International Process."

The system is carried out in two stages, which are thus described by the patentees:—

1. By precipitating and deodorising the sewage in settling tanks by the aid of a magnetic precipitant and deodorant called ferozone.

2. By passing the partly purified sewage effluent from the settling tanks through polarite filter-beds, which arrest any solids remaining in suspension and oxidise and render innocuous the putrescible matter held in solution.

A very concise description of this process was given in a paper contributed to the Institution of Civil Engineers by Mr. Arthur Bowes, A.M.I.C.E., in 1894, from which many of the following particulars are extracted.

The precipitant employed, known by the trade name "Ferozone," principally consists of sulphates of iron and alumina, but from a comparison of the two following analyses its composition would appear to be very variable.

MR. CARTER BELL.

	Per cent.
Sulphate of iron, anhydrous	21·17
,, alumina ,,	22·20
Carbon	7·16
Constituents insoluble in water	12·70
Water of constitution and other matters not determined	16·77
Moisture	20·00

SIR HENRY ROSCOE.

		Per cent.
Soluble Constituents.	Ferrous sulphate	26·64
	Aluminium ,,	2·19
	Calcium ,,	3·30
	Magnesium ,,	5·17
Insoluble Constituents.	Silica	11·35
	Magnetic oxide of iron	19·01
	Combined water	8·20
	Moisture	24·14

The ferozone is added to the crude sewage (after straining) in the proportion of six to eight grains per gallon, depending upon the quality of the sewage, and thoroughly mixed with it. The mixing is performed either by suspending the ferozone in baskets in the inflowing sewage and allowing it to dissolve gradually; or by grinding it to powder, dissolving it in water, and adding it separately to the sewage. In the latter case, mechanical mixers, automatic or otherwise, must be employed.

The sewage is then conducted to the precipitation tank, when the sludge, which is comparatively small in quantity, is deposited. This tank may be any shape to which the engineer has a partiality. The "International Company" recommend for small tanks an arrangement which Mr. Bowes describes as follows:—

"The tanks are cylindrical with flat bottoms. In the vertical axis of the tank is a wrought-iron shaft, which, on being rotated by bevel-gearing and a hand-winch, carries round with it a perforated outlet-pipe, placed a few inches from the bottom of the tank, where it dips into the sludge. The central end of this perforated pipe is connected with an outlet sludge-pipe, which is carried up the side of the tank to within about 18 in. of the surface of the water and is provided with a stop-valve. With the tank full of water there is thus a head of 18 in. above the final outlet of the sludge, and this pressure is sufficient to force the sludge through the perforations in the radial pipe upwards through the outlet; while, by means of the gearing, the radial pipe can be caused to traverse the whole extent of the circular bottom of the tank. This cleansing operation is, of course, only necessary when sufficient sludge has been deposited to render its removal desirable. One advantage of this arrangement is that the cleansing is carried on without emptying the tank; indeed, it is stated that the process of precipitation need not be interrupted."—"Proceedings of the Institution of Civil Engineers," vol. cxviii., p. 309.

The objections to this form of tank are:—

1. They are liable to get out of order.

2. The sludge contains a large proportion of moisture.

3. The act of drawing off the sludge produces considerable disturbance in the deposit, causing it to rise to the surface in great lumps.

In the report of the consulting chemist, Dr. C. A. Burghardt, on the now classical experiments conducted at the sewage works of the Borough of Salford, in 1890, the following statements are made with regard to this process:—

"With regard to the ferozone, its purifying action upon the sewage can only be a limited one, because there can be nothing present in the sewage which could decompose such a very fixed and stable compound as sulphate of iron (ferrous sulphate) in such a manner as to liberate the ferrous oxide (protoxite of iron), and set it free to act upon the sewage organic matter as an oxydiser. In order for this decomposition of the ferozone to be brought about, the sewage would have to be distinctly alkaline always through the presence in solution of a caustic alkali, such as caustic soda or caustic lime. I always found the sewage—as delivered to the mixing apparatus described above—to be neutral in reaction and free from caustic alkali; therefore no such decomposition of the ferozone could have taken place. The analyses conclusively show that this oxidation of the organic matters in this process is almost entirely brought about by the action of the filter-bed and not by the action of the precipitant."

After passing through the precipitation tank, where the sludge is deposited, the sewage which is now more or less clarified passes on to the filter-beds. These filter-beds consist of layers of gravel and sand and polarite, arranged usually as follows:—

Sand	10 to 12 in.
Polarite and sand mixed in equal quantities	12 in.
Sand	4 to 6 in.
Gravel and shingle containing 4-in. drain-pipes	variable.

Through such a filter, ordinary sewage, after precipitation and subsidence, may be passed at the rate of 800 to 1,000 gals. per square yard per 24 hours.

The beds must be used intermittently so as to allow for efficient aëration.

The following analyses of polarite do not appear to indicate greater uniformity of composition in this substance than in ferozone:—

DR. C. A. BURGHARDT.

	Per cent.
Magnetic oxide of iron	19·19
Sesquioxide of iron	53·93
Protoxide of iron	7·25
Calcium oxide	1·43
Silica	15·16
Carbon	1·80
Water	1·44

SIR HENRY ROSCOE.

	Per cent.
Magnetic oxide of iron	53·85
Lime	2·01
Silica	25·50
Alumina	5·68
Magnesia	7·55
Carbonaceous matters and moisture	5·41

It was originally supposed that the purifying action of polarite upon the organic matter contained in sewage was due to the so-called "magnetic" state of the iron. This theory assumed that a catalytic action was set up in the pores of the polarite, causing the oxygen contained in them to combine with the organic matter of the sewage. The discovery of the biological action of filters has revolutionised the whole subject, and Mr. Dibdin's opinion of polarite under the new aspect has been already quoted, viz., "That the polarite filter excelled the coke-breeze only in appearance, the actual purification not being quite so much, whilst the cost is prohibitive."

Polarite costs about 4*l.* 16*s*, and ferozone about 2*l.* 10*s.* per ton.

GENERAL BUILDING NEWS.

BOARD SCHOOLS, ILFORD.—The Cleveland-road block of school buildings, which has been erected by the Ilford School Board, were opened recently. The new buildings form a block three stories high. Mr. C. J. Dawson, of Barking, is the architect. The buildings are designed on the class-room and central hall system. The total accommodation is for 1,614 children, viz., 634 infants on the ground floor, 490 girls on the first floor, and 490 boys on the second floor. In the infants' department there is one class-room for 86, seven for 66 each, and a baby's-room for 86. The girls' and boys' departments have each two class-rooms for 70 children, and seven for 50. In each story is a central hall 65 ft. long and 32 ft. 6 in. wide, all the nine class-rooms in each depart-

ment directly opening on to it. There are cloakrooms on each story. The staircases are of stone. Private rooms, cloakrooms, and lavatories for teachers are provided, and, in addition, there are storage rooms in each story, and basement accommodation. Above the buildings is a ventilating turret. The exterior is of blue Staffordshire bricks and moulded facing bricks, picked out in buff terra-cotta. The interior walls have a 4-ft. dado of glazed bricks and tiles, with primrose bricks above. The floors are of steel joists and concrete, covered with wood blocks. There is a lift for raising coals to the various floors. There are four drinking fountains in the grounds. The work of erection has been carried out by Messrs. Kirk & Randall. Mr. George Wren has been clerk of the works.

PEOPLE'S PALACE, ABERDEEN.—At the meeting of the Plans Committee of the Aberdeen Town Council a few days since, the plans of the new music-hall to be erected in Aberdeen by Messrs. Livermore Brothers were submitted by Mr. John Rust, architect. The new hall is to be built in Bridge-place, on the site of the hall which was destroyed recently by fire. The whole building, including the stage, is lighted by electricity. The building is estimated to cost 6,000*l.*

CHURCH RESTORATION, WHEATLEY AND BURTON, YORKSHIRE. — The Parish Church of North and South Wheatley with West Burton was reopened on the 19th inst. by the Bishop of Southwell. The church had been closed since April last for alterations. The work has been supervised by Mr. Hodgson Fowler, architect, of Durham, and the contractors were Messrs. Close, of Lincoln. A new roof has been constructed, and the chancel arch has been restored. The church has been reseated, and the cost of the whole alterations has been 1,400*l.* As part of the restoration, the bells in the tower have been rehung, and one new bell has been added, making a peal of six.

COTTAGE HOSPITAL, CAMPBELTOWN, ARGYLLSHIRE.—On the 19th inst. the cottage hospital at Campbeltown was opened. The hospital has been built from designs by Mr. Burnet, architect, Glasgow, at a cost of 3,600*l.*

PEOPLE'S PALACE, GLASGOW.—The People's Palace and Winter Garden are now in an advanced stage of construction on Glasgow Green. The building will be devoted to recreation, comprising a picture gallery, a museum, and a sculpture-hall. The ground floor is intended to be the recreation-room and library, the second floor the museum, and the third floor will be set apart for pictures and sculpture. Internally, the museum is approached by a staircase leading from the entrance-hall, which communicates with the winter-garden beyond. An octagon hall, lit from the dome in the centre of the top floor, will be devoted to the sculpture gallery. The Palace is built of red-stone. The building has been designed by the City Engineer, Mr. A. B. Macdonald. The winter garden is constructed entirely of iron and glass, and is reached through the stone structure. The cost of the Palace is estimated at about 20,000*l.*

PUBLIC LIBRARY, ARBROATH. — The old High School at Arbroath is being converted into a library, and Mr. Hugh Gavin has been appointed architect of the work. Messrs. Calder Brothers, builders, will have charge of the outward alterations, &c., on the buildings, and Mr. J. Robertson will carry out the joiner work.

VOLUNTEER BARRACKS, DARWEN.—The foundation-stone has just been laid of the new Volunteer Barracks at Darwen. The building now being erected by Mr. John Knowles, contractor, of Darwen, from plans by Messrs. McCall & Robinson, architects, of Blackburn, will be 50 ft. square and two stories in height. On the ground floor will be the armoury, and upstairs offices and officers' mess rooms, &c. It will be built of brick, and is estimated to cost 1,600*l.*

ALTERATIONS, ST. PATRICK'S CHURCH, CORK. —The alterations at St. Patrick's Church, Cork, which have been in progress for the past eighteen months, will shortly be completed. A parishioner having left 10,000*l.* to be expended in enlarging the edifice, the designs for the work were entrusted to Mr. George C. Ashlin, of Dublin. All the work has been carried out by the firm of Sisk & Sons. The clerk of works is Mr. Thomas O'Byrne.

SCHOOLS, BRISTOL. — It is intended to build schools for 168 boys in the St. Michael's district, Bristol. The contract has been let to Mr. C. A. Hayes, and the architect is Mr. W. V. Gough.

LIBERAL CLUB, MELTHAM, YORKSHIRE. — A new Liberal Club has been opened by Sir James Kitson, Bart., M.P., at Meltham. The building is situate in the Mill Moor-road. There is a large lecture room, providing accommodation for 300 persons; billiard, reading, smoke, committee, and other rooms. The building has been erected from designs by Mr. Wm. Carter.

EVANGELICAL UNION CHURCH, BELFAST.—The memorial stone of the First Evangelical Union Church has just been laid in Rugby-avenue, Belfast. The new church has a frontage of 57 ft., and extends about 160 ft. back to University-avenue. The church buildings include not only a church 70 ft. by 40 ft., but also two halls (one about 30 ft. square), minister's, committee's, and ladies' rooms, and other offices, with a large yard, altogether forming a block of 46 ft. by 40 ft. The materials for the building are principally brick, with a sparing use of Aspatria sandstone, and a simple treatment of fifteenth century Gothic has been adopted. Access is obtained to the vestibule of the church through two large doorways with engaged shafts, having moulded bases and carved caps. A square tower occupies one side of the front from which will rise a spire and vane 120 ft. high. The sides of the church are divided by buttresses, with double-light Tudor windows between them. Mr. Robert Corry is the contractor for the works. Messrs. Young & Mackenzie are the architects.

ASYLUM, GARTLOCH, GLASGOW.—The new asylum at Gartloch has been built for the City of Glasgow District Lunacy Board, and has just been completed. The cost is expected to be about 150,000*l.*, and the work has taken six years to complete. On the north side the buildings face Garnkirk and Gartcosh, while on the south they overlook the Bishop's Loch. The grounds cover 349 acres. There are eight different blocks of buildings. In the centre is the administrative block fronting towards Garnkirk and comprising entrance-hall, board and doctors' rooms, waiting-rooms, and sleeping apartments for the staff, while behind are general stores, kitchen, &c., and then behind that again the dining-hall, 90 ft. long by 48 ft. wide and 20 ft. high. It is seated for 350 patients. Above the dining hall is a recreation hall of the same dimensions. The two towers in the front of the administrative block are 130 ft. high, and contain water tanks. On either side of the centre block are the male and female wings. In the male wing are workshops for the inmates, while in the female wing is a large laundry. The hospital is placed at right angles to the asylum. All patients when they enter go through the hospital and are first placed in the observation ward, whence they are transferred, if harmless, to the convalescent or chronic wards of the asylum. If not harmless, they are placed in what is termed the noisy ward of the hospital, each patient there having a room to himself. Altogether in asylum and hospital there is accommodation for 540 patients. The architects who have designed and carried out the erection are Messrs. J. Thomson and R. D. Sandilands, Glasgow; and the principal contractors were Messrs. J. Crookston & Son, masons; Messrs. J. Herbertson & Son, joiners; Mr. James L. Arnot, plumber; Messrs. A. M. Ross & Son, slaters; Mr. J. M'Kenzie, plasterer; and Mr. James Moodie, painter.

SCHOOLS, CAUSEWAY LAKE, WOLVERHAMPTON. —The memorial stone of St. James's Branch School, Causeway Lake, Wolverhampton, was laid recently by Councillor F. T. Langley. The schools, which face Alma and New Sun streets, will accommodate 402 children, and cost 1,600*l.* The architect of the building is Mr. J. Lavender, and the builder Mr. H. Lovatt, both of Wolverhampton.

PROPOSED CHURCH, ASHBY.—The project for building a new church at Ashby—a village of 2,000 people—in the Scunthorpe iron and steel districts, has been so far proceeded with that plans have been prepared by Mr. Hodgson Fowler, of Durham, for an edifice, estimated to cost upwards of 4,000*l.*

RESTORATION OF ORFORD CHURCH, SUFFOLK. —The parish church of St. Bartholomew, Orford, has just been reopened after restoration. Mr. J. Micklethwaite was called on to examine the building previous to the restoration, and to report on its condition. He prepared plans and an estimate of the cost, viz., 10,000*l.* It was decided to proceed by sections, and to take in hand first the reconstruction of the nave roof. The contract for the new roof was put into the hands of Messrs. Cornish & Gaymer, of North Walsham and Norwich. The east wall of the chancel was rebuilt at the same time, including an east window; and on March 10 in the present year the Bishop of the Diocese attended to reopen the church. It was then resolved to re-roof the north aisle, restore the windows throughout the church (many of which were in a very dilapidated state) and renew the flooring of the nave and north aisle. Provision was also made for the effectual warming of the church. All this has now been accomplished, as well as certain necessary work of a temporary character. A temporary rood-screen has been erected, surmounted by a plain cross. In the course of the restoration a fine Norman arch, in perfect condition, was discovered in the east wall of the north aisle. The tower is in such a dilapidated state that it must be rebuilt and the bells re-hung. The south aisle awaits its new roof, and much necessary repair, and this includes the porch.

GROVE HALL, WANSTEAD, ESSEX.—The foundation stones of the Grove Hall, Wanstead, were laid recently. The hall is being built in Grove-road on a site adjoining the Congregational Church. It will have seating accommodation for 500 persons. The architect is Mr. E. M. Whittaker, and the builder is Mr. J. Jolliffe, of Wanstead.

CONGREGATIONAL CHURCH, PRESTON.—A new Congregational church, which has been built in the Hollingreave district, was recently opened. The new church is 74 ft. by 45 ft., with transepts at the north end, with minister's and choir vestries, and organ chamber. Accommodation is provided for 670 worshippers. The style is Renaissance. There is a tower and spire rising to a height of 90 ft. The total cost is about 4,500*l.* Messrs. Hitchon & Pritchard, architects, Burnley, have designed the building. The premises have a frontage to Hollingreave-road of 113 ft., and to Kirkgate of 63 ft. The buildings may be divided into two parts, viz., school and church. The following contractors have carried out the work, viz., mason's work, Mr. Thomas Smith, Burnley; joiner's work, Mr. John Wiseman, Colne; plumber's work and ventilation, Mr. William Scott, Burnley; slater's work, Messrs. Barnes & Sons, Todmorden; heating and lighting, Messrs. J. H. Pickup & Co., Bury; rostrum, Messrs. Collinge & Co., Limited, Burnley; railing, &c., Mr. Thomas Ashworth; plastering, Messrs. R. Rawlinson & Sons; painting, Mr. William Aspinall.

BUILDING ENTERPRISE, PELAW, DURHAM.— The Pelaw building estate, near the new railway-station, is being built upon, and streets of artisans' houses, both self-contained and in flats, are being rapidly erected. Shops are being built in rapid succession. A local co-operative society is about to erect large premises, which will be built under the supervision of Mr. James W. Frazer, architect, of Newcastle.

CORN MARKET HALL, ABERYSTWYTH. — The Corn Market Hall Company, Aberystwyth, have completed their arrangements for rebuilding the Corn Market Hall. The present structure will be demolished and a new building erected with four lock-up shops on the ground floor with a frontage to Market-street. The market-room will be at the rear of the shops, with an entrance from Market-street and Little Darkgate-street. On the first floor there will be an assembly-room capable of seating between 500 and 600 persons, with committee-rooms and lavatories. Access to this room will be obtained by a stone staircase situate on the corner of the building between Market-street and Little Darkgate-street, and by a stone staircase opposite the Talbot Hotel. The plans were prepared by Mr. T. E. Morgan, architect. The amount of the contract is about 2,530*l.*

WESLEYAN CHAPEL, HEAPHAM, LINCOLNSHIRE.—The new Wesleyan Chapel at Heapham, has just been opened. The structure is of red brick and Yorkshire stone, and has accommodation for nearly 100 people, with a school-room of proportionate size adjoining. Mr. J. Woods is the contractor, and Messrs. Eyre & Southall, of Retford and Gainsborough, the architects.

REOPENING OF GREAT HALE CHURCH, LINCOLNSHIRE. — This ancient church, which was damaged in the spring of 1895 by a severe storm, was reopened on the 19th inst. by the Lord Bishop of Lincoln. The nave and south aisle have been rebuilt, and other work carried out. Mr. Hodgson Fowler, of Durham, was the architect, the contractor being Mr. F. Pattinson, of Ruskington.

CO-OPERATIVE BAKERY, IPSWICH. — A new bakery and stables, situate on the Cauldwell Hall-road, St. John's, Ipswich, has just been opened. The architects were Messrs. Eade & Johns, and the builder was Mr. Catchpole.

SANITARY AND ENGINEERING NEWS

WATERWORKS, TROON.—The reservoir in The Glen for the supply of the burgh of Troon with gravitation water has now been completed. The water-surface when the reservoir is full will be eleven acres in extent, and the depth at the outlet 30 ft. It lies alongside the Aught Wood, a quarter of a mile above the farm of Collenan, and is fully two miles from Troon. The area draining directly into the reservoir extends to eighty-eight acres, but a catchwater drain has been constructed along the southern and western slope of the Dundonald range of hills, and from these two sources it is expected that the supply will not fall short of 72,000,000 gallons per annum. When full, the reservoir will contain 44,000,000 gallons of water, sufficient to give a supply of 200,000 gallons per day to Troon for a period of 220 days, even assuming that no water should be collected during that time. The embankment of the reservoir is 800 ft. in length, with a height of 39 ft. in the centre, and contains 60,000 tons of earthwork and stone pitching. The filters and clear water tank, situated immediately outside the reservoir embankment, are also nearly completed. The filters measure each 60 ft. by 54 ft., and the tank for the filtered water is 70 ft. in diameter, and has a capacity of 240,000 gallons. The pipes for conveying the water from the filters to Troon are all laid. They are 8 in. in diameter, and will be capable of taking down to the town water at the rate of 25 000 gallons per hour, or a daily supply of 200,000 gallons in the course of eight hours. The engineer of the new waterworks is Mr. W. K. Copland, C.E., Glasgow; and the contractor, Mr. James Osborne, Ayr.—*Glasgow Herald.*

WIDENING OF BLACKPOOL PROMENADE.—It is stated that plans have been completed by the Borough Engineer, Mr. J. Wolstenholme, for the widening of the Blackpool Promenade.

WATER SUPPLY, HEANOR.—On the 17th inst., Mr. Rienzi Walton, M.Inst.C.E., attended at the Public Offices, Heanor, to hold a public inquiry into the application by the Heanor Urban District Council, for sanction to borrow money for works of water supply. Mr. John Holbrook, surveyor, in answer to questions by the inspector, said he was the originator of the scheme on behalf of the

Council, and had reported to that authority. The plans were inspected by Mr. Walton, and the scheme explained in detail.

PROPOSED STREET IMPROVEMENT, CATTEDOWN, PLYMOUTH.—Mr. J. T. Marsh, Local Government Board Inspector, sat in the Council Chamber at the Plymouth Law Courts on the 20th inst. to inquire into a proposal to borrow 5,760*l.* for purposes of street improvements, &c., in the Cattedown district. Mr. J. Paton (Borough Surveyor) was present.

SEWERAGE SCHEME, HONLEY AND SOUTH CROSLAND, YORKSHIRE.—At Honley, on the 20th inst., Major-General H. D. Crozier, one of the Inspectors of the Local Government Board, held an inquiry with reference to an application by Honley and South Crosland Urban District Councils for a provisional order uniting the two districts for the adoption of a joint system of main sewerage and sewage disposal. The scheme includes the appointment of a joint Board to act as the governing body of the united district, and sanction was sought for the borrowing of 22,191*l.* to defray the cost of the proposed works. It was stated that a Joint Sewerage Committee had agreed to a scheme prepared by Mr. Radford, C.E., of Nottingham, and had entered into provisional agreements for the purchase of a site within the borough of Huddersfield for outfall, precipitation, and filtration works. Of the 22,191*l.* proposed to be borrowed, 13,386*l.* was apportioned to Honley, and 8,805*l.* to South Crosland. It was now proposed to increase the sum for Honley by 2,677*l.*, for additional sewers for Honley. The scheme would serve a population of 4,134 in Honley, and 2,756 in South Crosland.

SANITARY SCHEME, SELSTON, NOTTINGHAM.—A special meeting of the Selston Parish Council was held in the Congregational chapel recently for the purpose of examining the revised plans of the sanitary scheme for the parish, which had been submitted to them by the Basford District Council. The plans, as first prepared, were for a general scheme for the whole of the parish, at an estimated cost of 13,500*l.*, but, as many parts of the parish were already sewered, the Council opposed the scheme as first proposed. As a result, the plans were set aside, and the Engineer was instructed to prepare a new set of plans for a scheme to deal only with those parts of the parish which required sewering. The Chairman, Mr. Gill, explained what was proposed to be done by Mr. Walker, the Engineer. The Clerk read the estimate which had been received from the Engineer, and which stated that 7,000*l.* would cover everything which could possibly be foreseen. It is proposed to divide the scheme into five sections, as follows:—No. 1 section to include Westwood, Jacksdale, and Pye Hill; No. 2 to cover the locality near the "Bull and Butcher." The 3rd is only a very small section at Underwood; and the 4th section is to deal with the Pinxton Station and Beaufit-lane localities. Section 5 will deal with Upper Mexborough. The plans were examined, section by section, and the Council unanimously approved of the plans in their entirety, and recommended that they should be carried out as stated.

DRAINAGE SCHEME, UXBRIDGE, MIDDLESEX.—Mr. George Waller Wilcocks, M.Inst.C.E., the Inspector appointed by the Local Government Board, attended recently at the St. Matthew's schoolroom, Yiewsley, to hold an inquiry into the subject matter of the application of the Uxbridge Rural District Council to borrow the sum of 35,000*l.* for the purposes of sewerage and sewage disposal for the parishes of Cowley, Hillingdon East, West Drayton, and Yiewsley. Mr. Anstie, C.E., attended and gave evidence.

DUBLIN MAIN DRAINAGE WORKS.—The Dublin main drainage works, which have been in course of construction by Messrs. H. & J. Martin for the past few months, are making considerable progress. The main pipe which is to carry off the refuse has in some places been built, and the large excavations have been refilled in. The drains are about 4 ft. or 6 ft. wide, and close on 20 ft. deep. At Ormond-quay, Winetavern-street, Eden-quay, Marlborough-street, and other places, the excavations have been made, and in some portions of those places the sewer is built and covered up.

PROPOSED NEW BRIDGE AT BERWICK.—For some time past an agitation has been abroad for the widening, to meet present day requirements, of the historic Old Bridge which crosses the Tweed at Berwick, and links England to Scotland. The bridge, which occupied over twenty-four years in erection, was completed in 1634. It is 388 yards long, 17 ft. broad, and contains fifteen arches; and it is now a unique structure in the kingdom, the Corporation of Berwick still receiving an annual grant of 100*l.* from the Crown towards its maintenance. We understand that as a result of investigations on the part of the Bridge Committee at Berwick, Messrs. Sandeman and Moncrieff, C.E., Newcastle, have prepared a report stating that they will not recommend that anything be done to alter the present edifice, as they are afraid, as a result of their survey thereof, that the bridge would not bear it. Messrs. Sandeman & Moncrieff recommend, therefore, that a new foot-bridge be run across the Tweed, near the present bridge, at a cost of between 6,000*l.* and 7,000*l.*—*Newcastle Chronicle.*

STAINED GLASS AND DECORATION.

WINDOW, TANSLEY CHURCH, MATLOCK.—A stained-glass window, representing "The Good Shepherd," has been inserted in Tansley Church, Matlock. The window was painted by Mr. Reuben Bennett, of Manchester.

WINDOW, DONCASTER CHURCH.—The first of the new stained-glass windows in Doncaster Parish Church, to replace those damaged by the recent explosion of gas, was completed on the 19th inst. The subject is "The Ascension," and the Saviour is represented in the centre, with the eleven Apostles right and left. Messrs. Shrigley & Hunt, of Lancaster, are responsible for the work.

MEMORIAL WINDOW, WALKLEY CHURCH, YORKSHIRE.—On the 21st inst. the Rev. J. R. Eyre, vicar of Sheffield, dedicated a memorial window in St. Mary's Church, Walkley. The artist has selected his subject from Matthew, xix., 14, "Suffer little children to come unto Me, and forbid them not." The window is from the studio of Messrs. Kayll & Co., Leeds.

WINDOW, ST. JOHN'S CHURCH, WARLEY, YORKSHIRE.—A stained glass window has recently been put into the western end of the nave of St. John's Church, Warley. The subject is the Transfiguration. The window consists of three lights, and was designed by Mr. Frampton, of London.

FOREIGN.

FRANCE.—In the part of the Champs Elysées called the "Jardin de Paris" the works have been commenced for the construction of the tunnel which is to connect the two future palaces, and which will also be used for removing débris and bringing in building materials. —— A Committee has been formed to raise a monument to Paul Verlaine, the poet, probably in the Luxembourg garden. —— An interesting collection of the works of Manet is on view at the Galerie Durand-Ruel, Paris. ——The National Museums Committee has had removed from the Louvre a picture attributed to Millet, recently purchased, the authenticity of which is questioned. On the other hand a fine picture by Boucher, "Petit Dejeuner de Matin," has been hung in a better position.——The jury of the competition opened at Noyon for the construction of a municipal theatre has awarded the first premium to M. Chas. Letrosne, of Paris; the second to M. Colombier, of Compiègne; the third to M. Laffillée, of Paris.—— The Municipal Council of Lyons has after some discussion, decided to erect the proposed monument to Paul Dupont, the poet, in the Chartreux garden. The monument has been designed by M. Gaspard André, architect.——M. Gustave Lanson, a distinguished sculptor, has died at the age of 48. He made a reputation by his statue of the "Poete Chantant" in the exhibition of 1867.——The death is also announced of M. Emile Mauran, architect, author of various works on decorative art, and architect of the theatre at Passy.

JAPAN.—During the past few years the applications of electricity have been very much developed in Japan, and in order to regulate the various projects which are being carried out, the Minister of State for Communications has issued regulations which must be observed. An electric tramway is being constructed in Tokio, and many of the waterfalls in the country are being utilised for the purpose of generating power. The telegraph system of the country has been very complete for a good many years; but now there is evidently a boom on for telephones, which are being extended to all parts of the country. In fact, in the matter of telegraphs and telephones, it is probable that in some respects Japan is further advanced than Britain. The Japanese are, however, evidently not content with the progress which has been made, and have despatched a commission of electrical experts to America for the purpose of studying all the most recent developments in that country, so that they may be utilised in Japan. Somehow or other the Japanese have the knack of appropriating the best of all Western advances, and it is a curious problem to watch the resultant.—*Indian Engineer.*

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENTS.—Mr. D. W. M'Innes, formerly London agent for the Carron Company, has become part proprietor and Director of the firm of Hayward Bros. & Eckstein. Mr. Alexander Thom succeeds Mr. M'Innes as representative of the Carron Co.

OPEN SPACES.—Dr. Tristram, Chancellor of the Diocese, has granted faculties in respect of the churchyards of St. Matthew's, Bethnal Green, and St. Peter's, Cheapside. St. Matthew's parish was taken out of Stepney in 1743; the church, consecrated in 1746, was gutted by a fire on the night of December 18, 1859, and rebuilt by a rate levied on the parish; the architect being Mr. T. E. Knightley, who raised the tower by two stories. It is stated that the Metropolitan Public Gardens Association have undertaken to lay out the graveyard—which is of considerable extent—at a cost of from 700*l.* to 800*l.*, and that the vestry will maintain it as an open space. The buried remains will not be displaced, but the gravestones are to be removed, and re-arranged. The old manor-house of Stepney, near the Green, a residence of the Bishops of London, was pulled down in the making of Victoria Park, 1844-5. Kirby's Castle, or "Blind Beggar's House," stood on the Green's east side; it was built by John Thorpe, in 1570, for John Kirby. Ainsworth, author of the "Latin Dictionary," kept a boys' school at Bethnal Green. The Association laid out, as a public garden, the Victoria-park cemetery, 11½ acres, which was opened two years ago, and is now maintained by the London County Council. The faculty for St. Peter's, Cheapside, relates to a proposed widening by the Commissioners of Sewers of the south end of Wood-street by throwing a part of the churchyard into the roadway. The alteration will involve a removal of some of the human remains to Ilford Cemetery, but we understand that the large plane-tree, which may have suggested to Wordsworth the locality of his ballad, "Poor Susan," will not be disturbed. In "Walks in London," Mr. Hare writes, "The terms of the leases of the neighbouring houses forbid the destruction of the tree, or the building of an additional story that may injure it." In Wood-street lived Thomas Wood, goldsmith, and Sheriff in 1491-2, who contributed largely towards the rebuilding of St. Peter's-at-the-Cross-in-Cheap, and erected the fronts of the houses, Goldsmith's-row, in Cheapside opposite. Hatton, in his "New View," says St. Peter's was built by Sir John Shaw, *obiit*, 1503. In front stood the Queen Eleanor's Cross, finally demolished in 1643. After the destruction of the church by the Great Fire the parish was united to that of St. Matthew, Friday-street, whose church, by Wren, was pulled down ten years ago. Hudson Turner says the Cross was built by Henry of Huntingdon; some ascribe it to Michael of Canterbury.

THE PERMANENT WAY INSTITUTION.—The second meeting for the season of this Institution was held at the Half Moon Hotel, 88, Gracechurch-street, on the 11th inst., Mr. W. Hirst, hon. treasurer, occupying the chair. Mr. W. H. Elliott, the chief signal inspector of the G. S. and W. Railway of Ireland, showed and explained two models of signal apparatus. One was so constructed that it would work with twenty-six levers a signal-box now requiring fifty levers, a considerable reduction in the cost of construction of signal cabins, levers, connexions, &c., being consequently affected. He stated that his lever apparatus had been approved by one of the Board of Trade inspectors. One lever could be so constructed as to work the arms of four signals, and properly lock and protect the road, all connexions being made on one lever. One signal cabin which had been fitted on his system formerly required, he pointed out, twenty-eight levers, but was now being worked with sixteen levers. In another instance, at Portarlington Station, fourteen levers were doing the work for which twenty levers were formerly required. The cost of fitting his apparatus was, he explained, practically the same as the old. Special reference was made to the bars and plungers used on the G. S. and W. Railway of Ireland, and Mr. Elliott mentioned that the new style had been adopted in nearly every case where facing points were used. A vote of thanks was afterwards accorded to Mr. Elliott, and the meeting erminated.

GORDON TECHNICAL COLLEGE, GEELONG.—We have received the annual report, for 1895, of this College, an institution which appears to be struggling to keep up its standard under rather adverse financial circumstances. Towards the close of last year, in fact, the Government announced that the subsidy would in future be confined to art subjects (a singular declaration to make in regard to a Technical College), but a strong appeal, supported by the Parliamentary representatives of the town, led to this threat being withdrawn. Mr. H. Hayward, formerly drawing-master for the State Schools of Geelong, was appointed instructor of the Free-hand Drawing Classes in 1894, and has since conducted these, and in addition, more recently, the Practical Geometry Classes. Classes for Oil and Water Colour Painting have been carried on under Mr. E. Sasse. The Trade classes are said to have been doing good and efficient work, and a fine collection of trade exhibits was sent to the Industrial Exhibition at Ballarat; the Carpentry, Construction, and Joinery class under Mr. Tingate has turned out creditable work; and Mr. Kerr has been fortunate in having in his Plumbing class students who are bent upon gaining a thorough knowledge of sanitary matters, and whose future influence is looked to for the improvement of plumbing and drainage work in the district.

PULLING OLD HOUSES ABOUT.—A correspondent sends us a photograph showing the results which may follow from carelessly pulling about and altering old houses without having fully ascertained their structural condition. The Liberal Union Club at Crewe had purchased two houses with the view of converting them into a political club. Alterations were being carried on, chiefly in the way of removing internal division walls to make larger rooms, when early in the morning and before the men were at work, the whole place collapsed, falling into an absolute ruin. The caretaker, who was a railway servant, had just gone out to his work, but unhappily his wife was seriously injured in the ruins, and is now at the hospital in a very precarious condition. The

moral is that it is well to examine the structure of an old building in detail, and ascertain that the walls and partitions are really what they appear to be, before taking liberties with it.

BUILDING BY-LAWS, BURY.—The Borough Surveyor of Bury, in his annual report, states that a committee was appointed to consider the adoption of the model by-laws as recommended by the Local Government Board. This committee spent much time in considering the subject, and ultimately decided there was ample powers in the provisions contained in the present building by-laws and the several Private Acts of the Corporation, and recommended to the Council that an effort should be made to obtain the consent of the Local Government Board to a modification of the present by-law No. 10, which provides for the "distance across" and the "superficial area of the back yards." The Council sanctioned this proposal, and the committee had an interview with one of the secretaries and the Architect to the Local Government Board, but failed to obtain approval to their propositions. The representatives of the Board, however, suggested a slight modification, which they would accept on account of the unusual width of the back streets. The committee did not consider the concession sufficient, and pressed that an Inspector should be sent down to Bury to see the special conditions upon which the Corporation felt justified in pressing for a modification. The Board have lately acceded to this suggestion, and an Inspector is to come down. At the interview with the Local Government Board Officials, a point in the interpretation of the by-laws —which has led to much discussion and varied interpretation by the members of the Council— was raised, *i.e.*, as to the meaning of the terms "distance across" "open space." The reply was that "the yard wall must be taken as the opposite property," "the open space must be wholly at the rear, or wholly at the side."

A NATIONAL CHAMBER OF TRADES.—The Hull and District Chamber of Trades request us to give publicity to the following :—Steps are being taken to form a preliminary committee for the purpose of making arrangements for holding a general conference on trade combination with a view to the formation of a National Chamber of Trades. It is proposed that this committee shall meet in Leeds in the early part of January, and trade associations throughout the country are invited to communicate with the undersigned as early as possible. It is suggested that local conferences be held and delegates elected, but officials of associations are invited to forward their suggestions forthwith in order to assist the preliminary committee. Any representatives willing to act upon this committee are also requested to notify to Mr. J. Walker Clark, President of Drapers' Association, Halifax; Mr. G. R. Stokes, Secretary of the Traders' Association, Henley; or with Mr. S. T. Nicholson, Secretary of Hull and District Chamber of Trades.

THE MANCHESTER ROYAL INFIRMARY TO BE REBUILT.—At a meeting, which was held on the 19th inst., of the grand committee appointed by the trustees of this institution to consider the best means of obtaining the necessary increased accommodation, reports were received from two of the three sub-committees who were appointed eighteen months ago, and it was decided, after a long and full discussion, by a majority of 26 votes to 8, to recommend to the trustees the adoption and carrying out of the design of the committee, who reported in favour of rebuilding the infirmary on the present site.

LEGAL.

THE CLAIM AGAINST THE ST. PANCRAS GUARDIANS.

THE further hearing of this claim, which arises out of the contract for erecting the workhouse buildings in King's-road, was resumed at the Referees' Court before Mr. Ridley, Q.C., on the 20th inst., a report of the former proceedings having appeared in last week's issue of the *Builder*.

It will be remembered that the plaintiffs, Messrs. T. Drew-Bear, James Brown, Henry Tolputt, and the contractor, Mr. Wm. Brooks, of Folkestone, seek to recover a sum of about 24,000*l*., which they allege is due under a contract for the erection of the workhouse buildings, the defendants being the St. Pancras Guardians and Messrs. Arthur & Christopher Harston, the architects. In November, 1894, the contract between Mr. Brooks and the Guardians was determined owing to disputes between the contractor and Mr. Poole, the clerk of the works appointed by the Guardians Board, the plaintiffs' case being that the contractor, Brooks, was prevented from continuing the work by the action of Poole, who condemned the materials without sufficient cause. The defendants, while generally denying liability, relied on the Public Authorities Protection Act of 1893, which provides that they are not responsible for damages after the expiration of six months from the date of the occurrences alleged by the plaintiffs.

Mr. Reginald Bray and Mr. Alfred Hudson appeared as counsel for the plaintiffs and the contractor; Mr. English Harrison and Mr. W. Moyses for the defendants, the St. Pancras Guardians; and Mr. MacIntyre and Mr. R. W. Turner for the architects, Messrs. Arthur & Christopher Harston.

Mr. Fearon, further cross-examined by Mr. MacIntyre, said that the stone used for the staircases in the building was laminated, as all York stone was.

Mr. MacIntyre pointed out that the specification stipulated that the York stone used was to be of the best description, free from all lamination and all other defects.

The witness replied that Yorkshire stone had never grown which was free from lamination. They procured the stone from Armitage & Co., whose quarry was at a place near Wakefield. Nearly the whole of the York stone used in the landings of B Block was sent back. Mr. Harston first of all passed the stone, but Poole afterwards, when it was fixed, condemned it. Mr. Harston then said that, as Poole had objected to it, he (witness) must take it out. On one side of B Block he took out five landings. Some of the stones were in London now, and could be seen. The merchants were now trying to sell those stones, which had been condemned, but they had not as yet succeeded. That was because the stones were large, and Armitages wanted their price for them. The stone was constantly being complained of, like everything else. It was impossible to get York stone which was not bedded.

Mr. MacIntyre said that he could not understand that, as it was not in accordance with a letter which Messrs. Armitage had written, and which ran, "We will not send any more bedded stone; we will send you good solid rock."

The learned Referee said that it must have been that they were going against the laws of nature.

Mr. MacIntyre replied he did not know, but at any rate that was Messrs. Armitage's letter.

Cross-examination continued :—

York stone was used for the hearths. That stone did not come from Armitage's but from John Knight. Mr. Harston had not approved of those people.

Mr. MacIntyre pointed out that it was stipulated that the York stone was to be from an approved quarry.

Cross-examination continued :—

A large block of Portland stone was complained of, but that was used; witness, in fact, insisted upon using it. Drew-Bear supplied all the galvanised tanks, and all but three were complained of. Five of the tanks for B block went to be re-galvanised, and came back in much the same state. When they came back after that he could not say whether all or any of them had to go back again. The tanks for A block which Poole sent back to be re-galvanised were in good condition. They might have shown a spot of rust, but that was usual with galvanised tanks. There was no complaint as to the brick work of the arches. Poole did make a complaint as to the plastering. Poole supplied all the details, not Mr. Harston. Poole gave him a plan to work to, but it was an "impossible plan." The fault was with the plan, not with the work. The arch was built to the rise and section on the plan. The plan produced he had never seen before, nor had he seen a tracing of it. The plasterers' foreman who did the work was not present. Poole told the foreman that he would not allow the plastering to be done until he (Poole) had given him a plan. They went as near to Poole's plan as possible by making the angles less acute. Poole certainly gave his man the plan to do the work by, and that was the cause of the trouble.

Referring to the roadway the witness stated that Poole had, amongst other complaints, urged that the flints used had too much hoggin in them. He (witness) did not agree with this, and considered that the flints were a fair average sample. He considered that Walker, his sub-contractor, had supplied him properly. The letter from his foreman to Walker stating that "the flints which are found fault with are a very bad sample" had nothing to do with him (witness). He was not answerable for his foreman's letter. The roads were there now, and that was a proof as to their quality. Clay and hoggin were practically the same thing for road-making purposes. He did not mean to say that if his contract provided that he should use hoggin in road-making he might use clay.

Mr. MacIntyre said if that was so, he could not understand how they could be considered by the witness as practically the same for road-making purposes.

As to the cast-iron sashes in K block, which had been condemned, the witness admitted that part was bad, and he sent them back. The cases of sashes which were returned to Drew-Bear were not sent back again by Drew-Bear. Witness asked Mr. Harston to allow him to use wrought-iron sashes, as there was a difficulty in getting cast-iron sashes; but Mr. Harston said that he should insist on cast-iron sashes being used. Messrs. Harston and Poole raised so much objection to their using wrought-iron sashes that he had to give it up.

In June, 1893, Poole said that the lintels were too high. There might have been a space of 3 in. between the top of the door jamb and the lintel. Poole wanted the lintel tight down on the door jamb. That was not, in his opinion, the proper way to do it. There was no necessity to fill up the interval with plaster at all. All the brick-work was taken out and the lintels cut away. They were ordered to do that in June, and had not done it until the following October. He (witness) refused to do it. Mr. Harston said that he should not give a certificate until he did do it. He (witness) did not consider it was justified at all. Poole complained of the system he (witness) adopted in the plastering of the walls and ceilings.

The witness was then re-examined by Mr. Hudson. He said that the architects told him that he was to carry out the instructions of the clerk of the works. All the work had to be done under the direction of the clerk of the works. There was delay in having to do the work under his direction, as they did not know what to do in many cases. He tried to please as much as he could, and pushed on with the work as fast as possible. He and Brooks on October 31, 1893, were pushing on the work as fast as possible. Witness could point out the picked stock facing bricks which had been condemned by Poole, which were still to be seen in A B C H and K Blocks. They rubbed off Poole's marks with water, but in some cases they cut out and replaced portions. A foreman to Messrs. Holland's (who was sub-contractor for certain timber) named Smith came and examined the work on B and C, when half way up in November or December, 1892, and in August, 1893, a clerk of works from the Leavesden Schools came to examine them. The bricks cost from 43*s*. to 47*s*. for stocks, and for malm facings as much as 63*s*. per thousand. Only 3 000 bricks were bought at 63*s*. for chimney shafts. 45*s*. for stock facings was a high price. The laminated York landings condemned by Poole were 12 ft. or 14 ft. long by 6 ft. or 7 ft. across, and all ran 4 in. thick. The witness, referring to the iron work, said that he did not know why Poole wished him to get it off Matthew Thos. Shaw, but he objected to his going to Drew-Bear & Co., on the ground that he had had trouble with them before. If he (witness) could have had possession of the extra site he would have put a foreman on each block, and carried on all at once. Referring to the tie-beam timber, the witness stated that he had to order twelve beams when only six were required. That was on account of Poole condemning so much, and he (witness) determined to provide enough so that it might pass. The gutters were provided by Macfarlane according to specification.

Mr. Tom Drew-Bear, examined by Mr. Reginald Bray, said that he was the senior partner in the firm of Drew-Bear, Perks, & Co., engineers, of Queen-Victoria-street, E.C., and formerly for many years a partner in the firm of Rowson, Drew, & Co., of Upper Thames-street. When he was a partner in the latter firm he had done business with Brooks for many years, whose credit was then excellent. When the contract in question was undertaken, Mr. Fearon called on him and he quoted prices of ironwork. Brooks afterwards accepted his prices. The columns were cast from the patterns in wood supplied by the Guardians—probably left by Kirk & Randall. Altogether seventeen columns were rejected. They had been cast by Goddard & Massy, of Nottingham, a well-known firm. Massy, with his representative, Shardlow, went on October 3, 1893, with witness to the workhouse, and examined the eight columns then rejected, and they demanded of Poole why they had been condemned. Poole, however, declined to see them, referring them to Fearon. He (witness) could not see any defect in them, except that some brackets were $\frac{1}{8}$th in. askew, a detriment which would make no difference to the strength. The castings were of fair quality. Massy then declined to replace the columns, and he (witness) had them re-cast elsewhere at a cost of 18*l*.

To the Referee: He depended upon Fearon to point out the rejected columns and those he showed were the ones sent back.

Examination continued :—

When he found that nothing he sent would suit, he wrote at the end of 1893 asking to be relieved of the sub-contract; but Fearon wrote back saying that he could not allow him to withdraw on account of the delay. The absence of lugs from other columns at a later date was due to the fact that they were not shown on the patterns. Witness proposed to make the lugs in wrought iron and tap them on, and then the work would have been as strong as cast work, and, of course, of equal appearance. The columns were fixed by Stephen Hunt and his son in witness's employ, and were put up in the usual way roughly in position, and before the work was bolted up they were put absolutely in line. He (witness) often went up to the job on account of the number of complaints, and could say that no undue pressure was used in putting them in line. The rejected iron-rolled joists were of ordinary stock from the usual mills at H section. When they were returned he could see no fault in them; and when Poole's attention was called to this they were taken back. (B 2) girders were rejected as under specified weight, and on testing them they proved to be $1\frac{1}{2}$ lbs. to 2 lbs. per foot run under weight; but it was impossible to avoid slight variations in rolled work. The specification stated 61 lbs. per square foot, whereas Dawnay's list gave 67 lbs. as the proper weight for the section, so that he (witness) had to select light girders to keep within the limit of weight. The specification was based on Dawnay's list, and the number of the girder (B2) was taken from that list. Two other girders were objected to as being over weight, but the variations were so slight as to make no difference.

The makers of rolled joists asked a margin of 2 per cent. over and 2 per cent. under, and some makers asked 5 per cent. margin. His men had finished the iron staircase railing before Poole objected to it on the ground that the top-rail was, as usual, half-round, and not oval, as specified. He refused to remove it, and saw the Committee of the Guardians and Mr. Harston in April, 1894. The Chairman of the Committee said that the fclerk of the works was unreasonable, or something of that sort, and supported witness. In most cases the complaints were not made till the greater part of the labour had been done, and this was an instance in point. The galvanised tanks were complained of six months after delivery. He (witness) had the half a dozen back and cleaned, at a cost of 2*l.* 10s., and after being returned and hoisted they were again condemned and re-galvanised, at a further cost of 5*l.* 8s. 6d. These were re-tested at a further cost, and they came back a fourth time to be re-galvanised at a further cost of 10*l.* 10s., and finally they were again cleaned. They were good galvanised tanks, and were only discoloured from being stored in the open. These alterations occupied till December 14, 1893, the original delivery having been in January of that year. As to the straps on girders, Poole objected because he could get his penknife between the strap and the girder, demanding engine fitting. That was an unusual requirement. It was not true that Poole could get his finger in. In the rods the requirements Poole wanted made it impossible to fix them. Poole objected to them being welded, whereas they ran to 30 ft. and could not be got in one piece. In consequence of the complaints as to the holes in which the rods were fitted, he (witness) had to make a special punch, and as the walls were then built the cost of fixing them was six times as much as usual. Witness was supplying ironwork to another workhouse from Messrs. Harston's design, that of Lewisham, and not a single complaint was made there. At the St. Pancras workhouse one long girder came painted as usual, and as at Lewisham, and by Poole's orders he (witness) had to burn the paint off.

The learned Referee: I never heard of complaints of a girder being painted, as it tends to protect it; but I remember many complaints of their being unpainted.

Examination continued:—

He never was treated like this before.

Cross-examined by Mr. MacIntyre.

There were complaints from beginning to end of the contract.

The condemned columns were free from flaws or defects and the rejection was unjust. The girder in which it was said that the joists were not equal in size was perfect.

The learned Referee (to Mr. MacIntyre): If the variation was not material you are in your cross-examination of Fearon & Drew-Bear fighting the air, for the rolled joists must vary. The architects' rejecting the girder as 1½ lbs. too light per foot run is fatal to your case, Mr. MacIntyre, so far as the objection to the rolled work is concerned. There is nothing in the rejection of that girder whatever, and it is necessary for me after this to speak out.

The learned counsel then proceeded to cross-examine Mr. Drew-Bear as to the staircase railing when the learned Referee said that it would be better to call the architects and the Chairman of the Building Committee as to why the section as carried out was eventually passed. The variation in section from oval to half-round seemed to the learned Referee immaterial.

Cross-examination continued:—

Witness did not think that the galvanised tanks which were sent back to him on the first occasion required cleaning—at least, any more cleaning than Fearon could have done. It was absolutely unnecessary to send them back to the galvanisers. It was ridiculous to remove stains from a galvanised tank. That could have been done on the site if it were necessary. There was no necessity for rods 30 ft. in length. If Mr. Harston said they were not specified of such a length Poole must have ordered them.

Cross-examined by Mr. Moyses:

He supplied to Kirk & Randall, when the work was started, rolled joists but no columns. He entered into no contract with Mr. Brooks and never went into details as to how the account stood, but he supplied ironwork to a schedule. That was the usual way of conducting business. He had supplied ironwork to the workhouse at Lewisham, for which Johnson was the contractor, at about the same time. Messrs. Harston's were the architects and he received no complaints at that time. There were no fewer complaints when witness was acting as Trustee than when Brooks had the contract. He did not issue one rivetted girder out of a thousand unpainted.

After some further cross-examination as to the girders, the learned Referee said that the duty of the clerk of the works was to prevent scamping, but he must not use his powers so as to tyrannise. Whether this occurred in this instance was a question of fact and evidence.

We are compelled to break our report of this lengthy case at this point, but we may state that the further hearing is adjourned until January 18. A report of the evidence given up to the adjournment will be given in onr next issue.

ACTION BY A DEVONPORT BUILDER.

THE case of "Perkins *v.* Coombs" came before Mr. Justice Cave in the Queen's Bench Division on the 21st inst., it being an action which was begun before his Lordship on January 31 last at the Exeter Assizes, and which was by agreement referred to a referee. The referee having made his award, the case now came before his Lordship on further consideration.

It appeared from the statement of Mr. E. M. Bullen, who represented the plaintiff, that his client was a builder at Devonport, and he brought his action against the defendant, a gentleman also living at Devonport, for the sum of 103*l.* 16s., the balance he alleged to be due to him for work done. An arbitrator had found that there was a balance due to the plaintiff of 73*l.* 16s., or 30*l.* less than the amount he sought to recover in the action. The plaintiff admitted from the first that he owed the defendant 12*l.* 19s. for goods sold and delivered, and, no doubt, said the learned counsel, that item had been allowed for by the referee. In those circumstances he asked his Lordship to give judgment for the plaintiff for the amount of the award and costs of the action, including costs of taking up the award.

Mr. H. G. Duke, on behalf of the defendant, contended that the plaintiff was not entitled to the costs of the action. The defendant had instructed the plaintiff to execute three separate building contracts for him. The first came in round figures to 350*l.*, the second to 75*l.*, and the third to 25*l.* In respect of his account with the plaintiff, generally, the defendant had drawn cheques to the amount of 350*l.* at different times prior to the date of action, and at that time, he contended, the payments under the second and third contracts, which together came to 103*l.* 16s., had not become due and payable. The plaintiff, on the other hand, had appropriated the whole of the 350*l.*, received on account of the three contracts, generally, to the paying off in full of the first contract, certain items in which were disputed, and sought to recover the amount of the remaining two, which the defendant had never denied his liability to pay when the same became due.

His Lordship, in giving judgment, said that from the order which had been made when the case was referred to arbitration it was clear that the plaintiff had no power to appropriate the sum paid to the general account entirely to the paying off of one contract, and therefore judgment must be entered for the defendant together with the costs of the action. His Lordship, however, ordered that the defendant should pay the costs of the award and the amount awarded to the plaintiff by the arbitrator; the costs of the one to be set off against the costs of the other. He further directed that there should be no costs allowed to the present application.

THE ARTIST'S ACTION AGAINST CONTRACTORS.

THE case of Davis *v.* John Aird & Sons, reported in last week's issue of the *Builder*, again came before Mr. Justice Chitty, in the Chancery Division, on the 19th inst., it being a motion by the plaintiff, a Royal Academician having a residence near Radnor, in Wales, to restrain by injunction the defendants from continuing certain blasting operations in such a way as to be, as the plaintiff alleged, an intolerable nuisance to him.

It was now stated that an undertaking had been offered by the defendants, and accepted by the plaintiff, the action to be set down at once for trial, and the costs of the application to be costs in the action.

MEETINGS.

SATURDAY, NOVEMBER 28.

London and Provincial Builders' Foremen's Association.—Memorial Hall, Farringdon-road, E.C. 7.30 p.m.

MONDAY, NOVEMBER 30.

Society of Arts (*Cantor Lectures*).—Professor Vivian B. Lewes on "The Use of Gas for Domestic Lighting." I. 8 p.m.

Leeds and Yorkshire Architectural Society.—Mr. W. R. Corson on "Acoustic Proportions of Rooms; Mason Marks; and the Use of Practical Geometry in Designing Buildings." 7.30 p.m.

TUESDAY, DECEMBER 1.

Institution of Civil Engineers.—Paper to be further discussed, "The Bacterial Purification of Water." By Dr. Percy F. Frankland. 8 p.m.

WEDNESDAY, DECEMBER 2.

Architectural Association (*Discussion Section*).—Mr. A. E. Henderson on "The Byzantine Spirit in Italy and Sicily." 7 p.m.

Royal Archæological Institute of Great Britain and Ireland.—(1) Dr. J. Wickham Legg on "The Queen's Coronation Ring." (2) Mr. Christopher Turnor on "The Buried Cities of Yucatan." 4 p.m.

Carpenters' Hall (*London Wall*).—Professor Banister Fletcher on "Sanitary Construction." 8 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary meeting of the members. 8 p.m.

Northern Architectural Association.—Mr. W. E. Beck on "Slates and Slating." 7.30 p.m.

Society of Arts.—Mr. W. A. S. Hewins on "The Teaching of Economics." 8 p.m.

THURSDAY, DECEMBER 3.

Arts and Crafts Exhibition Society.—Mr. Halsey Ricardo on "Colour in Architecture." 8.30 p.m.

Builders' Benevolent Institution.—Annual Dinner at the hall of the Carpenters' Company, London Wall.

FRIDAY, DECEMBER 4.

Architectural Association.—Mr. H. H. Statham on "Street Architecture." 7.30 p.m.

Institution of Civil Engineers (*Students' Meeting*).—(1) Address by Mr. J. Wolfe Barry (President), and (2) Mr. David W. Kinmont on "Railway Signalling." 8 p.m.

RECENT PATENTS:

ABSTRACTS OF SPECIFICATIONS.

22,053.—GLAZING OF BRICK, TILE, AND OTHER SURFACES: *J. Gordon.*—This invention has for its object glazing of brick, tile, and other surfaces by the treatment of glass plates, so that when placed in position with their edges abutting, the space between shall be filled up with material in order to give the joint a neat appearance. Inventor attaches glass to the receptive surface by a mixture of heated asphalt and bitumen.

22,054.—GLAZING, &c.: *J. Gordon.*—The inventor produces glazed bricks, &c., or converts an ordinary brick wall into a glazed surface by a process detailed in Specification No. 22,053. Here he proposes to heat glass and receptive surface to at least 300 deg. Fahr. by means of an oil stove, and a hand blow-lamp for walls. Adhesive mixture to be composed of 75 per cent. asphalt and 25 per cent. bitumen.

24,389.—WOOD-BLOCK FLOORING: *W. T. Herbert and Another.*—The inventors claim in wood-block flooring a combination of blocks, having saw kerfs or grooves along two opposite sides or ends (instead of on all four sides) and of zigzag metallic bonding strips entering said saw cuts or grooves.

2,485.—BUILDERS' SCAFFOLDING: *A. G. Brookes.*—The invention comprehends a series of supporting standards with a series of adjustable platforms carrying frames provided with masons' and stock platform, each frame being provided with a wheelers' platform-support and other useful appliances.

9,586.—BRACKETS FOR RAIN-WATER GUTTERS AND SPOUTING: *A. Dolman.*—Instead of welding or rivetting two or more pieces of metal together, the inventor stamps back plate out of a solid piece of metal. At bottom of back plate he attaches projecting arm of bracket, at end of which is attached a semi-circular metal strip fastened also to back plate, which receives gutter, &c.

17,830.—LIME AND CEMENT KILNS: *J. Foster.*—The inventor adopts (1) in kilns for burning lime, &c., the arrangement of feeding fuel by means of a central shoot, formed in a superimposed bridge or arch; and (2) the general arrangement specified whereby kilns may be charged from the centre in a manner which permits of the indefinite heightening of the upper chamber without affecting the operation of feeding, thereby effecting economy of fuel and other advantages.

20,289.—WINDOW FRAMES AND SASHES: *L. Osborne and Another.*—The inventors claim (1) a window-frame having removable strips secured therein, by means of which the sashes may be temporarily withdrawn, in combination with notched bracket adapted to be temporarily secured to the face of the said frame for the purpose of supporting sashes; and (2) in combination with foregoing two strips adapted to be removed, whereby sashes may be removed temporarily from their bearings.

NEW APPLICATIONS FOR LETTERS PATENT.

NOVEMBER 9.—25,063, W. Hanlon, Supplying Disinfectants to Water-closets, Urinals, &c.—25,074, A. Barraclough, Tin-Lined Lead Pipes or Tubes.—25,106 and 25,107, W. Rockliffe, Door Fastening.

NOVEMBER 10.—25,145, B. Massey, Chimney Cowls.—25,154, J. Arnold, Disinfecting and Deodorising Trap for House Drains, Water-closets, &c.—25,198, A. Metcalfe, Fans or Propellers for Ventilation.—25,212, J. Greenwood, Chimney Pots, Ventilators, &c.—25,225, A. Fladder and G. Innes, Bricks, Tiles, &c.—25,259, G. Wincqz, Sawing and Cutting Stone and Marble.

NOVEMBER 11.—25,283, A. Brightmore, Theodolites, Levels, &c.—25,292, C. and G. Craig, Building Blocks and Method of Using Same.—25,304, H. Williams, Automatic Flush Tanks.—25,305, H. Williams, Improved Form of Basin for Water-closets, &c.—25,312, A. Pepperill and J. Phillips, Tool for Pointing and Painting.

NOVEMBER 12.—H. Clay, Urinals.—25,421, W. Beer, Construction of Metal Bridges and other Similar Structures.

NOVEMBER 13.—25,520, H. Kerrill, Water-closet Cisterns, Water-closet Urinals, and Lavatories.—25,521, R. Birtley, Detachable Cover Joint for Sanitary Pipes, Junctions, Traps, &c.—25,530, T. Taylor, Bonds or Ties for Ordinary and Cavity Walls.—25,593, C. Outram and G. Peck, Attaching Pipes to Closet Bowls and Other Receptacles of Earthenware and Similar Non-Metallic Material.

NOVEMBER 14.—25,629, A. Mosley, Jointing Stoneware Drain Pipes, &c.—25,645, H. Williams, Trough Closets and Urinals.—25,665, J. Duckett & Sons, Limited, and Others, Kilns.

PROVISIONAL SPECIFICATIONS ACCEPTED.

20,650, P. Fraser, Casement Fasteners.—21,403, C. Plant, Flushing Apparatus.—21,808, T. Baynes, Closet, Cistern, and Water-Waste Preventer.—21,913, J. Macalester, Holding Window Sashes, &c.—22,234, T. Skerman, Ventilators and Chimneys.—23,236, D. Morgan, Spring Action for Closing Doors, Gates, Casements, &c.—23,692, D. Grey, Flushing Apparatus.—24,078, W. Nicholson, "Fixing Bricks" for Building Purposes.—24,307, J. Sharp, Roof Coverings.—24,406, A Cameron, Opening Windows Inwardly.—24,467, B. Williams, Chimney Pots.

COMPLETE SPECIFICATIONS ACCEPTED.

Open to opposition for two months.

18,967, F. Brook, Pipes for Drainage, Sewerage, &c.—21,651, J. Hookham, Window Sill.—23,773, M. Dessau, Paving Blocks and Slabs.—553, W. Youlten, Casements.—746, C. Horton, Wood Screws, &c.—5,900, J. Hargreaves, Chimney Pots, &c.—20,790, M. Strüdel, Chimney Pots.

CONTRACTS AND PUBLIC APPOINTMENTS.

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Footbridge, Ferryside, Glos.	G.W.R. Co.	Sec. Paddington Station	Dec. 1
Three Bridges, Newbury and Kintbury	do.	do.	do.
Levelling, Paving, &c. Fink-street	Pontefract U.D.C.	A. Oddy, Boro' Surv. Town Hall	do.
Widening Church-road, Llanishen	Llandaff and Dinas Powis R.D.C.	J. Holden, C.E. Council Offices, Queen's-chambers, Cardiff	do.
Sewerage System, Cavehill-road	Belfast Union	Young & Mackenzie, C.E. Belfast	do.
Schools, Somerset	West Huntspill School Board	A. B. Cottam, Archt. Eastover, Bridgwater	do.
Malting, Retford	Walker & Homfrays, Lim.	R. Hardy, Archt. Wheelergate, Nottingham	do.
Excavating, Sewering, &c. Chapel-street	Stockport Corp.	J. Atkinson, C.E. St. Petersgate, Stockport	Dec. 2
Street Works, South-road	Weybridge U.D.C.	Surv. Council Offices, Baker-street, Weybridge	do.
*New Buildings	Lawrence Schools, nr. Brighton	Pinto & Watson, 45, Parliament-st. S.W.	do.
Pipe Sewer, West-lane	Keighley Corp.	W. H. Hopkinson, C.E. Municipal-buildings	Dec. 3
Lodging-house, East North-street	Aberdeen Town Coun.	Town Clerk, Town House	do.
Rostrum, Orchestra, &c. Grampound, Cornwall	.....	F. C. Jury, Archt. Tregonissey, St. Austell	do.
House, Northorpe, Ravensthorpe	.....	J. C. Haller, C.E. Saville Town, Dewsbury	do.
*Sea Wall, Esplanade, Roadway, &c.	Southend-on-Sea Corp.	H. Harlock, Town Hall	do.
Weaving Shed, Beckside, Mills, Great Horton	.....	J. Drake & Son, Archt. Queensbury, Yorks	Dec. 4
Public Buildings	Baldock (Herts) U.D.C.	Talbot, Brown, & Fisher, Archt. The Square, Wellingborough	do.
Public Abattoirs, near Cardiff	Barry U.D.C.	J. C. Pardoe, C.E. Council Offices, Barry	do.
Electric Generating Station, Canal-walk	Southampton Corp.	Surv. Municipal Offices, Southampton	do.
Warehouse Premises, Hunslet New-road, Leeds	J. Asquith & Son	T. Winn, Archt. 90, Albion-st. Leeds	Dec. 5
Malthouse, Weston	Bath Brewery Co. Ltd.	F. W. Gardiner, Archt. Bath	do.
*Various Stores	G. N. Railway	Mr. Martin, Stores Superintendent, Doncaster	do.
Nurses' Home at Workhouse	Bradford Union	J. H. Morton, Archt. South Shields	Dec. 7
Vagrant Cells, Workhouse	Colchester Union	G. H. Page, Archt. Trinity Chambers, Colchester	do.
*Sewerage	Hendon U.D.C.	S. Slater Grimley, The Burroughs, Hendon, N.W.	do.
Tenements, Stirling-road, &c.	Glasgow Corp.	J. D. Marwick, Town Clerk City Chambers	Dec. 8
*Roadmaking and Sewer Work	Bromley U.D.C.	Surv. at Council Offices	do.
*Roadmaking and Paving Works	Willesden D.C.	O. C. Robson, Dyne-road, Kilburn, N.W.	do.
*Making, &c. Bradgate-road	Lewisham Bd. of Wks.	Surv. Dept. Bd. of Wks. Offices, Catford, S.E.	do.
do. Merttins, Homeleigh, and Athenlay-roads	do.	do.	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Making, &c. Mount Ash-road	Lewisham B. of W.	Surv. Dept. Bd. of Works Offices, Catford, S.E.	Dec. 8
do. Oak Grove-road	do.	do.	do.
do. Elsmore and Kilmorie-roads	do.	do.	do.
*Fences, Boundary Walls, &c. &c.	do.	141, Greenwich-road, S.E.	Dec. 9
*Building for Staff Accommodation	Metropolitan Asylums Board	Norfolk House, Norfolk-st. W.C.	do.
Business Premises, &c. Silloth, Cumberland	J. Sharp	G. Armstrong, Archt. 75, Lowther-street, Carlisle	do.
Schools, Lovewell-road, Kirkley	Lowestoft Sch. Bd.	N. B. Nicholson, Clerk, Offices, Lowestoft	do.
Schools, Coach-lane, North Shields	Tynemouth Sch. Bd.	Marshall & Dick, Archts. 67, Saville-st. N. Shields	Dec. 11
*Enlarging Post Office at St. Helen's	Cum. of H.M. Works	12, Whitehall-place, S.W.	do.
*Sewerage	Surbiton U.D.C.	S. Mather, Victoria-road, Surbiton	Dec. 12
*Sea Wall and Widening Parade	Eastbourne Corp.	Boro' Surv. Town Hall	do.
*Cottage Homes, with Outbuildings	Croydon Union	F. West, 23, Coombe-road, Croydon	Dec. 14
C.-I. Water-mains, Folkestone-road	Dover T.C.	Town Clerk, Castle Hill House	Dec. 15
Chimney, Refuse Destructor, Burkley-road	Colne (Lancs) Corp.	T. H. Hartley, Boro' Surv. Town Hall	Dec. 16
*Short Railway (about 27 chains)	G.N.R. Co.	Engrs.' Office, King's Cross	Dec. 17
*Erection of Bridge	Derbyshire C.C.	J. S. Story, 21, Mary's Gate, Derby	do.
*Pumping Machinery	Rochford R.D.C.	James Mansergh, Engr. 5, Victoria-st. Westminster	Dec. 28
Three Cottages, Ashton-under-Lyne	Mrs. Shaw	T. George & Son, Old-sq. Ashton-upon-Lyne	No date
Sewerage Works	Hanley Corp.	J. Lobley, Boro' Engr. Town Hall, Hanley	do.
Enlargement of Schools, Smeaton	Nottingham Sch. Bd.	R. C. Clarke, Archt. Prudential Bldgs. Queen-st.	do.
Villa, Pentrefelin, near Llangollen	.....	Foulkes Jones, Solicitor, Llangollen	do.
Schools, Longfleet, Poole	.....	Sanders & Stillman, Archts. Bournemouth	do.
Alterations, &c. Parkwood-road, Pokesdown	.....	do.	do.
Two Shops and Alterations, James-street, Harrogate	.....	H. B. & A. Bown, Archts. Harrogate	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Architectural Draughtsman	Liverpool Corp.	120*l.* rising to 160*l.* per ann.	Dec. 4
*Sanitary Inspector	Paddington Vestry	100*l.* per annum	Dec. 17

Those marked with an asterisk (*) are advertised in this Number. *Contracts, pp.* iv., vi., *&* viii. *Public Appointments, pp.* xvi. *&* xix.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

November 5.—By Newbon & Co.

Barnsbury.—9, Boxworth-grove, u.t. 40 yrs., g.r. 8*l.*, r. 40*l.* £320
Boxworth-grove, i.g.r. 32*l.*, u.t. 39½ yrs., g.r. 2*l.* 605
Albion-grove, i.g.r. 118*l.*, u.t. 47½ yrs., g.r. 52*l.* 10s. 1,275
Islington, Payne-st., i.g.r. 47*l.*, u.t. 7½ yrs., g.r. 12*l.* 125
Cloudesley-rd., i.g.r. 58*l.* 10s., u.t. 5 yrs., g.r. 16*l.* 135
Mile End.—Clarke-st., i.g.r. 48*l.*, u.t. 4½ yrs., g.r. 10*l.* 130
City-rd.—3, 4, 5, 6, and 16, Underwood-st., u.t. 3 yrs., g.r. 15*l.* 160
Euston-rd.—George-st., &c., i.g.r. 84*l.*, u.t. 27 yrs., g.r. 20*l.* 890
Marylebone.—Richmond-st., &c., i.g.r. 79*l.*, u.t. 25 yrs., g.r. 43*l.* 300
Pentonville.—3, Percy-circus, u.t. 23 yrs., g.r. 5*l.* 5s., r. 50*l.* 320
Stepney.—35, Caroline-st., f., r. 42*l.* 310
Islington.—2, Rydon-st., u.t. 30½ yrs., g.r. 4*l.* 4s., r. 32*l.* 225
Holloway.—20, Gloucester-rd., u.t. 56 yrs., g.r. 5*l.* 255

By Thurgood & Martin (at Kingston).

Kingston-on-Thames.—125 and 127, London-st., and 1, 2, and 3, Hayman's-pl., f., r. 84*l.* 1,160

By Blackford & Son (at Southmolton).

Bishopsnympton, Devon.—Berwill Farm, 130 a. 0 r. 14 p., f. 2,438
Long Holcombe Allotment, 15 a. 0 r. 23 p., f. 262

November 6.—By Baker & Sons.

Hendon.—Mill Hill, freehold farm buildings and 15¾ a. 2,100
Hampstead.—4, 6, 8, and 10, Mazenod-av., f., r. 222*l.* 10s. 2,975

November 7.—By Bentley & Sons (at Howden).

Skelton, Yorks.—"The Manor Farm," 75 a. 0 r. 2 p., f. 3,600
Kilpin, Yorks.—An enclosure of land, 3 a. 3 r., f. 250

November 10.—By Mark Lidell & Son.

Lower Clapton.—Lea Bridge-rd., "The Jolly Anglers" Tavern, eighteen cottages, four shops, and a wharf adjoining, u.t. 18 yrs., g.r. 150*l.* 1,850
Bow.—4, Bloomfield-rd., u.t. 69½ yrs., g.r. 4*l.* 10s., r. 42*l.* 340
Bromley-by-Bow.—38 and 40, Spey-st., u.t. 69 yrs., g.r. 6*l.* 4s. 420

By E. Wood.

Poplar.—21, 23, and 25, Hill-place-st., 9, Sabbarton-st., and 18, Clifton-st., u.t. 78½ yrs., g.r. 8*l.* 600
Plaistow.—210 to 224 (even), Balaam-st., u.t. 82 yrs., g.r. 42*l.* 1,270
West Ham.—22, 24, and 26, Hollybush-st., u.t. 87½ yrs., g.r. 9*l.* 9s. 310
Tottenham.—12, Waverley-rd., u.t. 66 yrs., g.r. 4*l.* 15s., r. 16*l.* 105
Hackney.—75 and 77, Morning-lane, u.t. 77 yrs., g.r. 10*l.* 420
22, Essex-st., u.t. 74½ yrs., g.r. 6*l.* 5s., r. 30*l.* 300
Harlesden.—5, Charlton-rd., u.t. 91 yrs., g.r. 5*l.* 170

By Alfred Richards (at Tottenham).

Tottenham.—235, Philip-lane, f. 400
40, Portland, u.t. 80 yrs., g.r. 6*l.* £190
Edmonton.—123 and 125, Upper Fore-st., f. 400
6 to 11, Eaton-pl., f. 350

By A. Dowell (at Edinburgh).

Duror, &c., Argyllshire.—"The Estate of Auchindarroch," comprising about 5,300 acres 9,000

November 11.—By Eastman Bros.

Dulwich.—59, Wood Vale, u.t. 83½ yrs., g.r. 10*l.*, r. 38*l.* 305
Sydenham.—Burghill-rd., a freehold building plot 350

By H. Higgs & Co.

Islington.—1, 2, and 3, Smith's-bldgs., f., r. 40*l.* 980

By Terson & Son.

Camberwell.—1 to 9, and 17 to 25 (odd), Castlemain-rd., u.t. 68 yrs., g.r. 50*l.* 1,790
1 to 7, and 27 to 35 (odd), Tustin-st., r. 24*l.* 10s.; also l.g.r. 36*l.* 15s., u.t. 15 yrs., g.r. 60*l.* 730

By C. P. Whiteley.

Marylebone.—35 and 37, Lisson-grove, area 3,444 ft., f., r. 182*l.* 1,500

By Castle, Son, & Booth (at Banbury).

Hook Norton, Oxon.—"Hook Norton Grounds," 131 a. 0 r. 1 p., f. 3,400

By T. Woods (at Hounslow).

Hounslow, Middlesex.—Hanworth-road, &c., two enclosures of building land, 7 a. 0 r. 38 p., f. 1,920

November 12.—By Stimson & Sons.

Camberwell.—176, 178, and 180, Warham-st., f. 900
Brompton.—72, Finborough-road, u.t. 66¾ yrs., g.r. 9*l.*, e.r. 55*l.* 370
St. John's Wood.—24, Queen's-ter., u.t. 23 yrs., g.r. 10*l.*, r. 70*l.* 350
Clapham.—15, Crescent-grove, f., r. 65*l.* 750
Stockwell.—19 and 21, Broomgrove-road, u.t. 83 yrs., g.r. 9*l.* 12s. 230
Pentonville.—3 and 4, Vernon-sq., u.t. 23 yrs., g.r. 12*l.*, r. 76*l.* 495

By H. J. Bliss & Sons.

Victoria Park.—136, Grove-rd., u.t. 46½ yrs., g.r. 4*l.*, e.r. 36*l.* 350
Bethnal Green.—72 to 90 (even), Collingwood-st., u.t. 43 yrs., g.r. 63*l.* 600
Hackney.—26, St. John's Church-rd., f. 490
231, 233, and 235, Wick-rd., u.t. 55 yrs., g.r. 4*l.* 10s. 240
9, Pembroke-ter., u.t. 75 yrs., g.r. 6*l.* 6s. 250
Old Ford.—16, 18, 20, 22, and 24, Wright's-rd., f., r. 141*l.* 14s. 1,415
Kentish Town.—52, Crogsland-rd., u.t. 69½ yrs., g.r. 8*l.*, r. 42*l.* 410
Stratford.—High-st., freehold rental of 22*l.* for 40 yrs. 610

By C. C. & T. Moore.

Mile End.—35 and 37, Dunk-st., f., r. 78*l.* 1,020
39, Dunk-st. and "The Mile End New Town Synagogue," f., r. 50*l.* 960
Hardy-pl., f.g.r. 10*l.*, reversion in 42 yrs. 300
Essex-st., f.g.r. 10*l.*, reversion in 42 yrs. 260
30 and 32, Dunk-st., f., r. 46*l.* 18s. (a moiety only) 410
Chicksand-st., "The Enterprise" public-house, f., r. 60*l.* 1,580
Dalston.—7, Lansdowne-rd., u.t. 56 yrs., g.r. 6*l.* 18s., r. 33*l.* 270
Poplar.—172, East India-rd., the beneficial lease for 75 yrs., r. 40*l.* 430
Whitechapel.—45, Plumber's-row, f., r. 54*l.* 12s. £500
Old Ford.—12, Milton-rd., u.t. 65 yrs. g.r. 4*l.* 10s. 220

By Wyatt & Son (at Chichester).

Chichester, Sussex.—11, 12, 30, 31, 45, 46, 47, and 48, Tower-st., f. 690
Sidlesham, Sussex.—Highleigh, a freehold cottage 110

November 13.—By W. W. Jenkinson.

Hampstead.—80, Belsize-pk.-gardens, u.t. 65 yrs., g.r. 5s. 1,450

By H. C. Newson.

Hackney Wick.—23 to 45 (odd), Trego-rd., u.t. 63 yrs., g.r. 48*l.*, r. 218*l.* 8s. 850

By Willis & Crouch.

Camden Town.—244, High-st., u.t. 28 yrs., g.r. 7*l.*, r. 80*l.* 1,000
Holloway.—114, Cottenham-rd., u.t. 58 yrs., g.r. 5*l.* 14s., r. 24*l.* 195
Haggerston.—34, 35, 36, and 37, Lee-st., u.t. 22½ yrs., g.r. 12*l.* 820

By G. A. Wilkinson & Son.

City of London.—9 and 11, Fenchurch-av., and 8, Billiter-sq., area 4,630 ft., u.t. 62 yrs., g.r. 1,885*l.*, r. 5,320*l.* 20,500
49 and 50, Old Bailey, area 2,160 ft., u.t. 51 yrs., g.r. 250*l.*, r. 600*l.* 6,500
49a, Old Bailey, area 2,900 ft., u.t. 51 yrs., g.r. 215*l.*, r. 850*l.* 9,600
48, Old Bailey, area 3,690 ft., u.t. 51 yrs., g.r. 292*l.*, r. 1,230*l.* 7,160
Sydenham.—West Hill, "The Roccles," and 1 a., f. 2,400
Tottenham.—430, West Green-rd., u.t. 81 yrs., g.r. 12*l.*, r. 50*l.* 500

November 14.—By A. H. Turner & Co. (at Weybridge).

Weybridge, Surrey.—Portmoor-pk., a freehold block of land with building thereon, area 8,400 ft. 590

November 16.—By Osborn & Mercer.

Dulwich.—Upland-rd., f.g.r. 40*l.* 10s., reversion in 83½ yrs. 1,320

By Reynolds & Eason.

Dalston.—110, Dalston-lane, u.t. 55 yrs., g.r. 6*l.*, r. 36*l.* 350
25, St. Phillip's-rd., u.t. 54 yrs., g.r. 6*l.* 18s., r. 35*l.* 320
Stoke Newington.—19, Victoria-grove, u.t. 14 yrs., g.r. 5*l.* 5s. 190

By Kettle & Butler.

Hornsey.—53 to 61 (odd), Boyton-rd., u.t. 84 yrs., g.r. 28*l.* 7s., r. 126*l.* 610
Crouch End.—63, Weston-pk., u.t. 85 yrs., g.r. 10*l.* 10s., r. 50*l.* 450

November 17.—By Debenham, Tewson, & Co.

City of London.—Upper Thames-st., "Dowgate Wharf," area 3,650 ft., f. 7,000

By E. & H. Lumley.

Brayton, York.—"The Gateforth Estate," comprising 2,086 a. 2 r. 2 p., f. 75,000

By T. N. Turner.

Edgware-rd.—6, Queen-st., and 3, Queen's-ter., u.t. 32½ yrs., g.r. 10*l.*, r. 83*l.* 655

By Furber, Price, & Furber.

43, Poland-st., Beneficial Lease for 19 yrs., r. 125*l.* 180
St. Pancras.—50, Bidborough-st., u.t. 10 yrs., g.r. 16*l.* 16s. 140

32, Poland-st., Beneficial Lease for 14¼ yrs., r. 75*l.*	£220
Shepherd's Bush.—370, Uxbridge-rd., u.t. 47 yrs., g.r. 6*l.* 10*s.*, r. 35*l.*	295
Victoria Park.—124, Sewardstone-rd., u.t. 59½ yrs., g.r. 2*l.* 19*s.* 6*d.*, r. 32*l.*	225
Theydon Garnon, Essex.—A rent charge of 35*l.* 16*s.* By MATTHEW MILES (at "Masons' Hall Tavern").	1,000
West Smithfield Market.—"The Cock Tavern," lease for 21 yrs., r. 700*l.* ... By EGERTON, BREACH, & GALSWORTHY (at Salisbury).	4,100
West Harnham, Wilts.—"The Dairy Farm," comprising 107 a. 0 r. 28 p., f. By ALFRED RICHARDS (at Enfield).	3,600
Enfield.—Bush Hill Park, 1 to 4, Edith-cottages, f.	500
Bush Hill Park, Percival-rd., plot of land, f. ...	150

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.			TIMBER *(continued)*.		
Greenheart, B.G.	ton	£/s/s	Satin, Porto Rico	0/0/7	0/1/6
Teak, E.I. ..load		11/10/0 £6/10/0	Walnut, Italian ..	0/0/3	0/0/7
Sequoia, U.S.ft.cu		2/0 0/1	METALS.		
Ash, Canada load		2/15/0 4/0/0	Iron—Pig, in Scotland	ton	2/2/10½
Birch, do.		3/5/0 5/0/0	Bar, Welsh, in London		5/15/0 5/17/6
Elm, do.		3/10/0 4/15/0	Do. do. at works in Wales		5/10/0 5/12/6
Fir, Dantsic, &c..		2/5/0 4/5/0	Do. Staffordshire, in London		5/15/0 6/10/0
Oak, do.		2/15/0 3/15/0	COPPER—British cake and ingot		52/15/0 53/5/0
Canada		4/10/0 5/10/0	Best selected ..		54/0/0 54/10/0
Pine, Canada red		0/0/0 0/0/0	Sheets, strong..		58/10/0 59/10/0
Do. Yellow		2/5/0 4/5/0	Chili bars		49/2/6 0/0/0
Lath, Dantsic, fath		4/10/0 5/10/0	YELLOW METAL	lb	0/0/5 0/0/5½
St. Petersburg ..		5/0/0 6/10/0	LEAD—Pig, Spanish	ton	11/13/0 11/15/0
Wainscot, Riga &c., log....		2/5/0 4/10/0	English com. brands		11/15/ 12/0/0
Odessa, crown..		2/5/0 4/10/0	Sheet, English 6 lbs. per sq. ft and upwards ..		12/15/0 0/0/0
Deals, Finland 1st & 1st std 100		8/0/0 9/12/0	Pipe		13/5/0 0/0/0
Do. 4th & 3rd ..		8/0/0 8/0/0	ZINC—English sheet	ton	22/10/0 0/0/0
Do. Riga		6/10/0 7/10/0	Vieille Montagne		21/10/0 0/0/0
St. Petersburg, 1st yellow....		20/0/0 22/10/0	Spelter		18/0/0 18/2/6
Do. 2nd yellow		9/0/0 10/0/0	TIN—Straits		58/3/0 0/0/0
Do. white		8/10/0 20/10/0	Australian.....		60/0/0 0/0/0
Swedish.....		8/0/0 16/0/0	English Ingots..		62/10/0 63/10/0
White Sea.....		9/10/0 15/0/0	Banca		60/10/0 61/0/0
Canada, Pine 1st		21/10/0 24/0/0	Billiton		59/15/0 60/0/0
Do. do. 2nd		15/0/0 17/0/0	OILS.		
Do. do. 3rd, &c.		7/0/0 9/10/0	Linseed .....ton		16/5/6 0/0/0
Do. Spruce, 1st.		7/5/0 8/10/0	Cocoanut, Cochin		28/0/0 0/0/0
Do. do. 2nd and		7/5/0 8/10/0	Do. Ceylon		24/0/0 0/0/0
New Brunswick		7/0/0 7/10/0	Palm, Lagos		24/10/0 0/0/0
Battens, all kinds		5/0/0 20/0/0	Rapeseed, English pale		28/10/0 0/0/0
Flooring boards, sq., 1 in. prep. 1st.		0/3/0 0/18/0	Do. brown		27/0/0 27/10/0
Do. 2nd.....		0/3/0 0/12/6	Cottonseed ref. ..		25/17/6 26/10/0
Other qualities—		0/0/0 0/7/6	Oleine.....		29/0/0 30/0/0
Cedar, Cuba, .ft.		/4½ /5	Lubricating U.S.		0/6/3 0/7/6
Honduras, &c.		/4 /5	Do. black		0/4/9 0/6/6
Mahogany, Cuba		/4½ /8	TAR—Stockholm barrel		20/0 0/0/0
St. Domingo cargo av.		/4½ 1/1	Archangel.....		0/12/6 0/0/0
Mexican, do. do.		/4 /5	Turpentine....ton		22/12/6 0/0/0
Tobasco, do. do.		/5 /7			
Honduras, do. ..		/5 /6½			
Box, Turkey ton		4/0/0 15/0/0			
Rose, Rio.....		7/0/0 20/0/0			
Bahia		6/0/0 15/0/0			
Satin, St. Doming		0/0/7 0/1/0			

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays*. N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender: and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ALDERSHOT.—For the erection of school-buildings, board and waiting-rooms, Queen-road, West End, for the School Board. Messrs. Nash & Sop, architects, South-street, Farnham. Quantities by Mr. A. Brymer, 22, Surrey-street, Strand:—

		Extra if playground tar paved.
Bottenill & Son	£8,343 13 9	£399 3 0
Jenkins & Son	8,343 0 0	307 0 0
Pond	7,995 0 0	290 0 0
Peters & Son	7,820 0 0	418 0 0
Snuggs	7,777 0 0	453 0 0
Southon	7,596 15 0	414 0 0
Martin, Wells, & Co.	7,590 0 0	360 0 0
Wallis	7,549 0 0	345 0 0
Hughes	7,452 7 10	386 5 0
Kemp, Aldershot*	7,369 0 0	312 0 0
Tompsett & Co.	7,265 0 0	350 0 0
Hughes	7,230 2 5	302 2 8
Fitt	7,227 0 0	305 0 0
Architect's estimate	7,140 0 0	308 0 0

* Accepted.

BANGOR (Wales).—For additions, &c., to workhouse, for the Union Guardians. Mr. R. Davies, architect, Bangor:—

Watkin Jones	£1,029
Hugh Edwards, 2, Victoria-street, Carnarvon (accepted)	880

BISHOPSTEIGNTON (Devon).—For rebuilding the farm buildings, "Old Walls," for the Rev. G. T. Comyns. Mr. S. Segar, architect, Union-street, Newton Abbot:—

Andrews	£450	Pook	£360
Lee	445	Fey, Bishopsteignton*	350
Parker Bros.	394	*Accepted.	

BRIDLINGTON QUAY.—Accepted for the erection of stabling, &c., Trinity-road, for Mr. J. W. Brown. Mr. J. Earnshaw, architect, Wellington-road, Bridlington Quay:—

J. Sawdon, Bridlington £170

BROMSGROVE.—For the execution of drainage works, &c., Webheath, for the Rural District Council. Messrs. T. W. Baylis & Son, engineers, 3, Park-road, Redditch. Quantities by the engineers:—

Currall & Lewis	£815 10 0	Cruwys & Hobrough	£617 3 6
Jones & Fitz-Maurice	798 16 0	W. L. Meredith	596 7 3
John Jevons	728 16 9	H. Laugher	553 10 0
G. Law	647 0 0	Stewart & Turner, Gracechurch-street, London (accepted)	514 16 9
J. W. Lord	645 7 1		
J. McKay	641 18 7		
Saml. Turner	629 10 0		

CHISWICK.—For alterations and repairs at "George IV." public-house, Chiswick, for Messrs. Fuller, Smith, & Turner. Mr. J. Hume, architect, Chiswick:—

D. Heath	£199	L. Leeder & Co.	£138
I. Hunt	186	Adamson & Co.*	149
J. Fenson	181	* Accepted.	

COVENTRY.—For the erection of a cycle factory, Far Gosford-street, for Messrs. Townend Bros. Mr. E. J. Pursell, architect, Bank Chambers, Little Park-street, Coventry:—

A. Wincott	£4,700	Haywood	£3,975
Gowing & Ingram	4,400	Golby	3,950
R. Wooton	4,332	G. Puntham	3,904
J. Worwood	4,143	C. H. Barber, Coventry*	3,800
		* Accepted.	

CRICKLEWOOD.—For the London and South-Western Bank, Cricklewood Branch. Mr. E. Gabriel, architect. Messrs. G. R. Tasker & Sons, surveyors:—

Cowley & Drake	£5,918	Oldrey	£5,513
Kellett	5,675	Godson	5,375
Carmichael	5,606	Gould & Brand*	5,220
Sheppard	5,569	* Accepted.	

CROYDON.—Accepted for building a gymnasium at Elmhurst School, Croydon. Mr. Chas. A. Monday, architect, Croydon:—

Humphreys, Ltd. £325

DARFIELD (Yorks).—For the erection of eight houses, for Mr. G. Hoyle. Mr. J. Robinson, surveyor, Park Cottage, Wombwell:—

Excavating, Masonry, and Bricklaying.			
Greensmith	£792 0	Wm. Broadbent, Wombwell (accepted)	£792 10
Wm. Johnson	857 17		
Carpentry and Joinery.			
Dan Hammerton	£938 0	Jas. Taylor	£328 0
H. Taylor	299 8	C. Linford, Wombwell*	223 0
Duncan & Jones	275 0	* Accepted.	
Slating.			
C. Kemp, Swinton (accepted)	£79 6		
Plastering.			
E. Smith, Barnsley	£66 0		
McPartlain, Platts Common (accepted)	62 0		
Plumbing.			
Snowden & Son, Barnsley (accepted)	£14 0		
Painting.			
Snowden & Son	£21 0		
F. C. Wilson, Wombwell (accepted)	15 0		
For the whole of the Work.			
Hammerton, Darfield	£1,475 0		

EAST MOLESEY.—Accepted for the execution of surface-water drainage works, Creek and four other roads, for the Urban District Council. Mr. J. Stevenson, Surveyor, Walton-road, East Molesey:—

Geo. Wilson, Walthamstow, E. £1,353

EAST MOLESEY.—Accepted for making-up Seymour-road and three other roads, for the Urban District Council. Mr. J. Stevenson, Surveyor, Walton-road, East Molesey. Quantities not supplied:—

Seymour-road.—S. Atkins, Kingston	£478 15 6
Beauchamp-road, Section No. 1.—G. Wilson, Walthamstow	257 11 0
Beauchamp-road, Section No. 2.—W. Adamson, Kingston	231 0 0
Nightingale-road.—G. Wilson, Walthamstow	447 6 4
Grove-road.—Free & Sons, Maidenhead	255 0 0

FALMOUTH.—For the erection of dispensary buildings, for the Building Committee. Mr. Edward Iago, architect, Penryn, Cornwall:—

T. Pye, Falmouth £125

GORLESTON-ON-SEA.—For the making and draining of roads, "Belle Vue Estate." Messrs. Wright & Ratcliffe, engineering surveyors, Norwich:—

W. Bracey	£1,102 12 4	F. Hipperson*	£1,047 0 0
W. Cockrill	1,119 4 6	* Accepted.	

HARWICH.—For additions, &c., to school buildings, Esplanade, for the School Board. Mr. J. Start, architect, Cups Chambers, Colchester:—

Smith & Beaumont, Harwich £282

HAWORTH (Yorks.).—For the erection of store premises, Main-street, for the Co-operative Society, Limited. Messrs. Judson & Moore, architects, York Chambers, Keighley:—

Masonry.—Sunderland & Greenwood, Haworth, near Keighley	£1,856 18 6
Plumbing.—B. Lambert, Haworth, near Keighley	
Joinery.—Wood & Thornton, Haworth, near Keighley	
Slating.—Thos. Nelson, Manningham, near Bradford	
Plastering.—B. Whitaker, Haworth, near Keighley	

HOYLAND NETHER.—For fence-walling and forming playgrounds, for the School Board. Mr. W. J. Sykes, architect, Hoyland Nether, near Barnsley:—

Mark A. Hague, Hoyland Common, near Barnsley £259

KEIGHLEY.—For additions, &c., to the Volunteer Drill Hall. Messrs. J. Judson & Moore, architects, York Chambers, Keighley:—

Contracting.—H. V. Robinson, Lawkholme-lane, Keighley	£702 14 1½
Joinery.—W. Steele, Apsley-street, Keighley	
Slating.—T. Nelson, Maningham-lane, Bradford	
Plumbing.—Parke & Lodge, Bridge-street, Keighley	
Plastering.—Sawley & Kaberry, Parsonage-street, Keighley	

KESWICK.—Accepted for the erection of a parish council and reading room, Millbeck Parish Council, for the Undeveskiddaw Parish Council. Mr. Wm. Hodgson, architect, Keswick:—

Building.—Wm. Cowperthwaite, Victoria-street	£122 13 7
Joinery.—John Gardiner, Main-street	59 10 0
Dressed Stone.—J. H. Bromley, Stanger-street	27 3 3
Plumbing.—J. B. Banks	14 10 0
Painting.—Thos. Brown, St. John-street	9 10 0
[All of Keswick.]	

LEYTON.—For alteration and additions to the "Prince of Wales," High-road, Leyton, for Mr. H. A. Mayes. Messrs. Edward Brown & Son, architects, Commercial-street, Bishopsgate, E.C. Quantities supplied:—

Builders.			
J. V. Kiddle & Son	£3,600	W. Shurmur	£3,546
E. R. Danes	3,550	S. Goodall (withdrawn)	2,713
Pewterers.			
R. Davis & Son	£170 0 0	W. Rogers & Son	£130 0 0
Grimes & Son	133 0 0	Mathews & Sons	129 5 6
Gasfitters.			
J. Biggs	£240	Vaughan & Brown, Ltd.	£235

LEYTON (Essex).—For the execution of private and public street works, for the Urban District Council. Mr. Wm. Dawson, C.E., Town Hall, Leyton:—

Private Street Works.			
T. Adams	£3,544 5 0	R. Ballard	£3,131 18 8
G. J. Anderson	3,350 8 4	G. Wilson	3,044 5 5
W. Gibbs & Co.	3,320 14 7	W. Griffiths, Kingsland-road, N.*	2,987 15 10
J. Jackson	3,217 0 0	[Surveyor's estimate, £3,230.]	
Public Street Works.			
T. Adams	£1,946 8 9	G. & F. Anderson	£1,798 9 6
J. Jackson	1,867 0 0	Gibbs & Co.	1,797 14 1
R. Ballard	1,859 4 6	W. Griffiths, Kingsland-road, N.*	1,782 19 9
G. Wilson	1,839 10 0	[Surveyor's estimate, £1,835.]	
		* Accepted.	

LLANELLY.—For the erection of a schoolroom, &c., for the Trustees of Bethel Chapel. Messrs. Geo. Morgan & Son, 74, King-street, Carmarthen:—

Thos. & Jno. Brown	£1,144 17 0	T. P. Jones	£1,120 0 0
David Roblin	1,141 12 6	Wm. Clement*	1,070 0 0
Wm. Hopkin & Son	1,120 0 0	* Accepted.	
		[All of Llanelly.]	

LONDON.—For alterations at "The Indian Queen" public-house, Chiswick, for Messrs. Fuller, Smith, & Turner, Chiswick. Mr. J. Hume, architect, Chiswick:—

Adamson & Sons	£246	L. Leeder & Co.	£153
Rousell	157	J. Hunt (accepted)	130

LONDON.—For reconstructing at Mr. A. J. Palmers' Stores, 6, Warwick-street, Pimlico. Mr. Alfred Howard, architect, 53, The Outer Temple, W.C.:—

Day	£490	L. Leeder & Co.*	£395
Tredager & Co.	415	* Accepted.	

LONDON.—For building new enclosure walls and iron fence, &c., to Chiswick-lane, Chiswick, for Messrs. Fuller, Smith, & Turner, Chiswick. Mr. J. Hume, architect, Chiswick:—

J. Hunt	£447 10	L. Leeder & Co.*	£437 0
Adamson & Sons	446 0		
For additional work on adjoining piece of land.			
Adamson & Sons	£29 10	L. Leeder & Co.*	£25 10
S. Hunt	28 10	* Accepted.	

LONDON.—For pulling down and rebuilding stables, shops, and chambers at Ormond-yard, Queen's-square, W.C., for Mr. H. F. Gidden. Mr. Thomas Wilson, architect, 34, New Bridge-street, E.C.:—

John Barker & Co., Ltd.	£2,637	J. Chessum & Sons	£2,059
Robert Eddie	2,238	W. Sumner & Co., Ltd.	2,019
W. J. Coleman & Co.	2,200	Patman & Fotheringham	1,992
Clarke & Mannooch	2,107	Edwards & Medway	1,977
Edmund Toms	2,093	Charles Peek*	1,767
H. Wall & Co.	2,067	* Accepted.	

LONDON.—For taking down and rebuilding "The Golden Lion" public-house, 88, Great College-street, N.W. Messrs. Saville & Martin, architects and surveyors:—

Anley	£4,450	Toms	£4,255
Lamble	4,367	Dearing	4,170
Patman & Fotheringham	4,290	Gould & Brand*	4,168
T. E. Mitchell	4,279	*Accepted.	

LONDON.—For flats at Maitland Park-road, Haverstock-hill, N.W., for Messrs. Brinsmead & Goddard. Mr. Leonard V. Hunt, architect; Mr. G. Fleetwood, surveyor:—

Lamble	£9,763 0	Holloway	£9,120 0
Gregan	9,739 0	J. Stead	9,082 17
F. & H. F. Higgs	9,664 0	Scrivener	8,952 0
Jerrard	9,407 0	Toms	8,827 0
McCormick	9,393 0	Gould & Brand*	8,557 0
Whitehead	9,225 0	* Accepted.	

LONDON.—For alterations and additions to warehouse, Church-path, Newington Green, N., for Mr. H. Jack. Mr. E. Stone, architect, 4, Mansfield-road, Haverstock Hill, N.W.:—

Anley	£460 0	Saunders	£368 11
Wall	459 0		

LONDON.—For new flats, Maitland Park, Haverstock Hill. Mr. Leonard V. Hunt, architect. Quantities by Mr. G. Fleetwood:—

Lamble	£9,763 0	Holloway	£9,110 0
Gregar	9,759 0	J. Stead	9,082 17
F. & F. H. Higgs	9,664 0	Scrivener & Co.	8,952 0
Jerrard	9,407 0	Toms	8,827 0
McCormick	9,393 0	Gould & Brand	8,557 0
Whitehead	9,225 0		

LONDON.—For the erection of six residences, Kensington, for the Kensington Freehold Land Trust, Limited. Messrs. Booth & Fox, architects, 9, John-street, Adelphi:—

John Allen & Son	£3,765	J. Christie, Shepherd's Bush*	£2,962
G. Wilkinson & Sons	3,225	W. G. Richardson	2,750
H. Wall & Co.	3,209		
T. Wright	3,119		

* Accepted, subject to slight amendment.

LONDON.—Accepted for the erection of an infirmary, Palestine-place, Bethnal Green, for the St. Matthew Union Guardians. Messrs. Giles, Gough, & Trollope, architects, 28, Craven-street, Strand, W.C.:—

Thomas Rowbotham, Birmingham £134,000

LONDON.—For alterations to the "Priory Tavern," Belsize-road, Kilburn, for Mr. George S. Pummell. Mr. Dunn Carmichael, architect. Quantities not supplied:—

Dainton & Son	£1,221 10	J. Easterbrook & Sons (withdrawn)	£1,080 0
S. Hanson & Co.	1,129 10	* Accepted.	
C. Jones, Motcomb-street, S.W.*	1,097 0		

WEALDSTONE.—For making up Wordsworth, Shelley, and Milton-roads, and the road known as the Avenue, Wealdstone, Middlesex, for the Wealdstone Urban District Council. Mr. B. Wyand, Surveyor, Council Offices, Wealdstone:—

Name of Contractor.	Wordsworth-road.	Shelley-road.	Milton-road.	Avenue.	Totals.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Drury, H., Wealdstone*	430 10 8	367 7 5	514 14 5	210 3 3	1,743 1 9
Mann, G. R.	447 0 0	324 0 0	523 4 6	226 0 3	1,780 10 9
Wimpey & Co.	452 0 0	624 0 0	535 0 0	225 0 0	1,807 0 0
Frenk, Thos.	478 7 7	605 0 0	538 0 0	230 0 0	1,851 7 7
Ballard, R., Lim.	461 1 6	611 6 2	537 17 6	213 15 5	1,823 0 7
Hall, M.	501 9 11	589 4 2	552 3 2	229 19 8	1,872 9 9
Adams, T.	535 3 0	718 2 3	660 3 10	262 18 3	2,175 7 4
Jones, W. E., & Co.	510 14 0	644 17 0	602 19 0	238 17 0	1,996 18 0

* Accepted. Surveyor's total estimate, £1,730. 14s. 9d.

CONTRACTS AND PUBLIC APPOINTMENTS.

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Footbridge, Ferryside, Glos.	G.W.R. Co.	Sec. Paddington Station	Dec. 1
Three Bridges, Newbury and Kintbury	do.	do.	do.
Levelling, Paving, &c. Fink-street	Pontefract U.D.C.	A. Oddy, Boro' Surv. Town Hall	do.
Widening Church-road, Llanishen	Llandaff and Dinas Powis R.D.C.	J. Holden, C.E. Council Offices, Queen's-chambers, Cardiff	do.
Sewerage System, Cavehill-road	Belfast Union	Young & Mackenzie, C.E. Belfast	do.
Schools, Somerset	West Huntspill School Board	A. B. Cottam, Archt. Eastover, Bridgwater	do.
Malting, Retford	Walker & Homfrays, Lim.	R. Hardy, Archt. Wheelergate, Nottingham	do.
Excavating, Sewering, &c. Chapel-street	Stockport Corp.	J. Atkinson, C.E. St. Petergate, Stockport	Dec. 2
Street Works, South-road	Weybridge U.D.C.	Surv. Council Offices, Baker-street, Weybridge	do.
*New Buildings	Lawrence Schools, nr. Brighton	Pinto & Watson, 45, Parliament-st. S.W.	do.
Pipe Sewer, West-lane	Keighley Corp.	W. H. Hopkinson, C.E. Municipal-buildings	Dec. 3
Lodging-house, East North-street	Aberdeen Town Coun.	Town Clerk, Town House	do.
Rostrum, Orchestra, &c. Grampound, Cornwall	.....	F. C. Jury, Archt. Tregoniggy, St. Austell	do.
House, Northorpe, Ravensthorpe	.....	J. C. Haller, C.E. Savile Town, Dewsbury	do.
*Sea Wall, Esplanade, Roadway, &c.	Southend-on-Sea Corp.	H. Harlock, Town Hall	do.
Weaving Shed, Beckside, Mills, Great Horton	.....	J. Drake & Son, Archt. Queensbury, Yorks	Dec. 4
Public Buildings	Baldock (Herts) U.D.C.	Talbot, Brown, & Fisher, Archt. The Square, Wellingborough	do.
Public Abattoirs, near Cardiff	Barry U.D.C.	J. C. Pardoe, C.E. Council Offices, Barry	do.
Electric Generating Station, Canal-walk	Southampton Corp.	Surv. Municipal Offices, Southampton	do.
Warehouse Premises, Hunslet New-road, Leeds	J. Asquith & Son	T. Winn, Archt. 90, Albion-st. Leeds	Dec. 5
Malthouse, Weston	Bath Brewery Co. Ltd.	F. W. Gardiner, Archt. Bath	do.
*Various Stores	G. N. Railway	Mr. Martin, Stores Superintendent, Doncaster	do.
Nurses' Home at Workhouse	Bradford Union	J. H. Morton, Archt, South Shields	Dec. 7
Vagrant Cells, Workhouse	Colchester Union	G. H. Page, Archt. Trinity Chambers, Colchester	do.
*Sewerage	Hendon U.D.C.	S. Slater Grimley, The Burroughs, Hendon, N.W.	do.
Tenements, Stirling-road, &c.	Glasgow Corp.	J. D. Marwick, Town Clerk City Chambers	Dec. 8
*Roadmaking and Sewer Work	Bromley U.D.C.	Surv. at Council Offices	do.
*Roadmaking and Paving Works	Willesden D.C.	O. C. Robson, Dyne-road, Kilburn, N.W.	do.
*Making, &c. Bradgate-road	Lewisham Bd. of Wks.	Surv. Dept. Bd. of Wks. Offices, Catford, S.E.	do.
do. Merttins, Homeleigh, and Athenlay-roads	do.	do.	do.

CONTRACTS—*Continued.*

Nature of Work or Materials.	By whom Required.	Forms of Tender, &c. Supplied by	Tenders to be delivered.
Making, &c. Mount Ash-road	Lewisham B. of W.	Surv. Dept. Bd. of Wks Offices, Catford, S.E.	Dec. 8
do. Oak Grove-road	do.	do.	do.
do. Kismore and Kilmorie-roads	do.	do.	do.
*Fences, Boundary Walls, &c. &c.	do.	141, Greenwich-road, S.E.	Dec. 9
*Building for Staff Accommodation	Metropolitan Asylums Board	Norfolk House, Norfolk-st. W.C.	do.
Business Premises, &c. Silloth, Cumberland	J. Sharp	G. Armstrong, Archt. 75, Lowther-street, Carlisle	do.
Schools, Lovewell-road, Kirkley	Lowestoft Sch. Bd.	N. B. Nicholson, Clerk, Offices, Lowestoft	do.
Schools, Coach-lane, North Shields	Tynemouth Sch. Bd.	Marshall & Dick, Archts. 67, Saville-st. N. Shields	Dec. 11
*Enlarging Post Office at St. Helen's	Com. of H.M. Works	12, Whitehall-place, S.W.	do.
*Sewerage	Surbiton U.D.C.	S. Mather, Victoria-road, Surbiton	Dec. 12
*Sea Wall and Widening Parade	Eastbourne Corp.	Boro' Surv. Town Hall	do.
*Cottage Homes, with Outbuildings	Croydon Union	F. West, 23, Coombe-road, Croydon	Dec. 14
C.-I. Water-mains, Folkestone-road	Dover T.C.	Town Clerk, Castle Hill House	Dec. 15
Chimney, Refuse Destructor, Burkley-road	Colne (Lancs) Corp.	T. H. Hartley, Boro' Surv. Town Hall	Dec. 16
*Short Railway (about 27 chains)	G.N.R. Co.	Engrs.' Office, King's Cross	Dec. 17
*Erection of Bridge	Derbyshire C.C.	J. S. Story, 21, Mary's Gate, Derby	do.
*Pumping Machinery	Rochford R.D.C.	James Mansergh, Engr. 5, Victoria-st Westminster	Dec. 28
Three Cottages, Ashton-under-Lyne	Mrs. Shaw	T. George & Son, Old-sq. Ashton-upon-Lyne	No date
Sewerage Works	Hanley Corp.	J. Lobley, Boro' Engr. Town Hall, Hanley	do.
Enlargement of Schools, Sneinton	Nottingham Sch. Bd.	B. C. Clarke, Archt. Prudential Bldgs. Queen-st.	do.
Villa, Pentrefelin, near Llangollen	.....	Foulkes Jones, Solicitor, Llangollen	do.
Schools, Longfleet, Poole	.....	Sanders & Stileman, Archts. Bournemouth	do.
Alterations, &c. Parkwood-road, Pokesdown	.....	do.	do.
Two Shops and Alterations, James-street, Harrogate	.....	H. E. & A. Bown, Archts. Harrogate	do.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in.
*Architectural Draughtsman	Liverpool Corp.	120*l.* rising to 160*l.* per ann.	Dec. 4
*Sanitary Inspector	Paddington Vestry	100*l.* per annum	Dec. 17

Those marked with an asterisk (*) are advertised in this Number. *Contracts, pp.* iv., vi., *&* viii. *Public Appointments, pp.* xvi. *&* xix.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

November 5.—By Newbon & Co.

Barnsbury.—9, Boxworth-grove, u.t. 40 yrs., g.r. 8*l.*, r. 40*l.* £320
Boxworth-grove, i.g.r. 32*l.*, u.t. 39½ yrs., g.r. 2*l.* 605
Albion-grove, i.g.r. 112*l.*, u.t. 47½ yrs., g.r. 52*l.* 10*s.* 1,275
Islington, Payne-st., i.g.r. 47*l.*, u.t. 7½ yrs., g.r. 12*l.* 125
Cloudesley-rd., i.g.r. 58*l.* 10*s.*, u.t. 5 yrs., g.r. 16*l.* 135
Mile End.—Clarke-st., i.g.r. 48*l.*, u.t. 4½ yrs., g.r. 10*l.* 130
City-rd.—3, 4, 5, 6, and 16, Underwood-st., u.t. 3 yrs., g.r. 15*l.* 160
Euston-rd.—George-st., &c., i.g.r. 84*l.*, u.t. 27 yrs., g.r. 20*l.* 890
Marylebone.—Richmond-st., &c., i.g.r. 79*l.*, u.t. 25 yrs., g.r. 43*l.* 300
Pentonville.—3, Percy-circus, u.t. 23 yrs., g.r. 5*l.* 5*s.*, r. 50*l.* 320
Stepney.—35, Caroline-st., f., r. 42*l.* 310
Islington.—2, Rydon-st., u.t. 30½ yrs., g.r. 4*l.* 4*s.*, r. 32*l.* 225
Holloway.—20, Gloucester-rd., u.t. 56 yrs., g.r. 5*l.* 255

By Thurgood & Martin (at Kingston).

Kingston-on-Thames.—125 and 127, London-st, and 1, 2, and 3, Hayman's-pl., f., r. 84*l.* 1,160

By Blackford & Son (at Southmolton).

Bishopsnympton, Devon.—Berwill Farm, 130 a. 0 r. 14 p., f. 2,438
Long Holcombe Allotment, 15 a. 0 r. 23 p., f. ... 262

November 6.—By Baker & Sons.

Hendon.—Mill Hill, freehold farm buildings and 15½ a. 2,100
Hampstead.—4, 6, 8, and 10, Mazenod-av., f., r. 222*l.* 10*s.* 2,975

November 7.—By Bentley & Sons (at Howden).

Skelton, Yorks.—"The Manor Farm," 75 a. 0 r. 2 p., f. 3,600
Kilpin, Yorks.—An enclosure of land, 3 a. 3 r., f. 250

November 10.—By Mark Liell & Son.

Lower Clapton.—Lea Bridge-rd., "The Jolly Anglers" Tavern, eighteen cottages, four shops, and a wharf adjoining, u.t. 18 yrs., g.r. 150*l.* 1,850
Bow.—4, Bloomfield-rd., u.t. 69½ yrs., g.r. 4*l.* 10*s.*, r. 42*l.* 340
Bromley-by-Bow.—38 and 40, Spey-st., u.t. 69 yrs., g.r. 6*l.* 4*s.* 420

By E. Wood.

Poplar.—21, 23, and 25, Hill-place-st., 9, Sabbarton-st., and 18, Clifton-st., u.t. 78½ yrs., g.r. 8*l.* 600
Plaistow.—210 to 224 (even), Balaam-st., u.t. 82 yrs., g.r. 42*l.* 1,270
West Ham.—22, 24, and 26, Hollybush-st., u.t. 87½ yrs., g.r. 9*l.* 9*s.* 310
Tottenham.—12, Waverley-rd., u.t. 66 yrs., g.r. 4*l.* 15*s.*, r. 16*l.* 105
Hackney.—75 and 77, Morning-lane, u.t. 77 yrs., g.r. 10*l.* 420
92, Essex-st., u.t. 74½ yrs., g.r. 6*l.* 5*s.*, r. 30*l.* ... 300
Harlesden.—5, Charlton-rd., u.t. 91 yrs., g.r. 5*l.* 170

By Alfred Richards (at Tottenham).

Tottenham.—235, Philip-lane, f. 400
40, Portland, u.t. 80 yrs., g.r. 6*l.* £190
Edmonton.—123 and 125, Upper Fore-st., f. 400
6 to 11, Eaton-pl., f. 350

By A. Dowell (at Edinburgh).

Duror, &c., Argyllshire.—"The Estate of Auchindarroch," comprising about 5,300 acres 9,000

November 11.—By Eastman Bros.

Dulwich.—59, Wood Vale, u.t. 83½ yrs., g.r. 10*l.*, r. 38*l.* 305
Sydenham.—Burghill-rd., a freehold building plot 350

By H. Higgs & Co.

Islington.—1, 2, and 3, Smith's-bldgs., f., r. 40*l.* ... 980

By Terson & Son.

Camberwell.—1 to 9, and 17 to 25 (odd), Castlemain-rd., u.t. 68 yrs., g.r. 50*l.* 1,790
1 to 7, and 27 to 35 (odd), Tustin-st., r. 241*l.* 10*s.*; also l.g.r. 36*l.* 15*s.*, u.t. 15 yrs., g.r. 6*o*l. 730

By C. P. Whiteley.

Marylebone.—35 and 37, Lisson-grove, area 3,444 ft., f., r. 182*l.* 1,500

By Castle, Son, & Booth (at Banbury).

Hook Norton, Oxon.—"Hook Norton Grounds," 131 a. 0 r. 1 p., f. 3,400

By T. Woods (at Hounslow).

Hounslow, Middlesex.—Hanworth-road, &c., two enclosures of building land, 7 a. 0 r. 38 p., f. ... 1,920

November 12.—By Stimson & Sons.

Camberwell.—176, 178, and 180, Warham-st., f. ... 900
Brompton.—72, Finborough-road, u.t. 66¼ yrs., g.r. 9*l.*, e.r. 55*l.* 370
St. John's Wood.—24, Queen's-ter., u.t. 23 yrs., g.r. 10*l.*, r. 70*l.* 350
Clapham.—15, Crescent-grove, f., r. 65*l.* 750
Stockwell.—19 and 21, Broomgrove-road, u.t. 83 yrs., g.r. 9*l.* 18*s.* 230
Pentonville.—3 and 4, Vernon-sq., u.t. 23 yrs., g.r. 12*l.*, r. 76*l.* 495

By H. J. Bliss & Sons.

Victoria Park.—136, Grove-rd., u.t. 46½ yrs., g.r. 4*l.*, e.r. 36*l.* 350
Bethnal Green.—72 to 90 (even), Collingwood-st., u.t. 43 yrs., g.r. 63*l.* 600
Hackney.—26, St. John's Church-rd., f. 490
231, 233, and 235, Wick-rd., u.t. 55 yrs., g.r. 4*l.* 10*s.* 240
9, Pembroke-ter., u.t. 75 yrs., g.r. 6*l.* 6*s.* 250
Old Ford.—16, 18, 20, 22, and 24, Wright's-rd., f., r. 141*l.* 14*s.* 1,415
Kentish Town.—52, Crogsland-rd., u.t. 69½ yrs., g.r. 8*l.*, r. 42*l.* 410
Stratford.—High-st., freehold rental of 22*l.* for 40 yrs. 610

By C. C. & T. Moore.

Mile End.—35 and 37, Dunk-st., f., r. 78*l.* 1,020
39, Dunk-st. and "The Mile End New Town Synagogue," f., r. 50*l.* 960
Hardy-pl., f.g.r. 10*l.*, reversion in 42 yrs. 300
Essex-st., f.g.r. 10*l.*, reversion in 42 yrs. 260
30 and 32, Dunk-st., f., r. 46*l.* 18*s.* (a moiety only) 410
Chicksand-st., "The Enterprise" public-house, f., r. 60*l.* 1,380
Dalston.—7, Lansdowne-rd., u.t. 56 yrs., g.r. 6*l.* 18*s.*, r. 33*l.* 270
Poplar.—172, East India-rd., the beneficial lease for 75 yrs., r. 40*l.* 430
Whitechapel.—45, Plumber's-row, f., r. 54*l.* 12*s.* ... £500
Old Ford.—12, Milton-rd., u.t. 65 yrs. g.r. 4*l.* 10*s.*.. 220

By Wyatt & Son (at Chichester).

Chichester, Sussex.—11, 12, 30, 31, 45, 46, 47, and 48, Tower-st., f. 630
Sidlesham, Sussex.—Highleigh, a freehold cottage 110

November 13.—By W. W. Jenkinson.

Hampstead.—80, Belsize-pk.-gardens, u.t. 65 yrs., g.r. 5*s.* 1,450

By H. C. Newson.

Hackney Wick.—23 to 45 (odd), Trego-rd., u.t. 63 yrs., g.r. 48*l.*, r. 218*l.* 8*s.* 850

By Willis & Crouch.

Camden Town.—244, High-st., u.t. 28 yrs., g.r. 7*l.*, r. 80*l.* 1,000
Holloway.—114, Cottenham-rd., u.t. 58 yrs., g.r. 5*l.* 14*s.*, r. 24*l.* 195
Haggerston.—34, 35, 36, and 37, Lee-st., u.t. 22½ yrs., g.r. 12*l.* 820

By G. A. Wilkinson & Son.

City of London.—9 and 11, Fenchurch-av., and 8, Billiter-sq., area 4,630 ft., u.t. 62 yrs., g.r. 1,885*l.*, r. 5,320*l.* 20,500
49 and 50, Old Bailey, area 2,160 ft., u.t. 51 yrs., g.r. 250*l.*, r. 600*l.* 6,500
49a, Old Bailey, area 2,900 ft., u.t. 51 yrs., g.r. 215*l.*, r. 850*l.* 9,600
48, Old Bailey, area 3,690 ft., u.t. 51 yrs., g.r. 292*l.*, r. 1,230*l.* 7,160
Sydenham.—West Hill, "The Roccles," and 1 a., f. 2,400
Tottenham.—430, West Green-rd., u.t. 81 yrs., g.r. 12*l.*, r. 50*l.* 500

November 14.—By A. H. Turner & Co. (at Weybridge).

Weybridge, Surrey.—Portmoor-pk., a freehold block of land with building thereon, area 8,400 ft. 590

November 16.—By Osborn & Mercer.

Dulwich.—Upland-rd., f.g.r. 40*l.* 10*s.*, reversion in 83½ yrs. 1,320

By Reynolds & Eason.

Dalston.—110, Dalston-lane, u.t. 55 yrs., g.r. 6*l.*, r. 36*l.* 350
23, St. Phillip's-rd., u.t. 54 yrs., g.r. 6*l.* 18*s.*, r. 35*l.* 320
Stoke Newington.—19, Victoria-grove, u.t. 14 yrs., g.r. 5*l.* 5*s.* 190

By Kettle & Butler.

Hornsey.—53 to 61 (odd), Boyton-rd., u.t. 84 yrs., g.r. 28*l.* 7*s.*, r. 126*l.* 610
Crouch End.—63, Weston-pk., u.t. 85 yrs., g.r. 10*l.* 10*s.*, r. 50*l.* 450

November 17.—By Debenham, Tewson, & Co.

City of London.—Upper Thames-st., "Dowgate Wharf," area 3,650 ft., f. 7,000

By E. & H. Lumley.

Brayton, York.—"The Gateforth Estate," comprising 2,086 a. 2 r. 2 p., f. 75,000

By T. N. Turner.

Edgware-rd.—6, Queen-st., and 3, Queen's-ter., u.t. 32½ yrs., g.r. 10*l.*, r. 83*l.* 655

By Furber, Price, & Furber.

43, Poland-st., Beneficial Lease for 19 yrs., r. 125*l.* 180
St. Pancras.—50, Bidborough-st., u.t. 10 yrs., g.r. 16*l.* 16*s.* 140

38, Poland-st., Beneficial Lease for 14½ yrs., r. 75*l.* £220
Shepherd's Bush.—370, Uxbridge-rd., u.t. 47 yrs., g.r. 6*l.* 10s., r. 35*l.* 395
Victoria Park.—124, Sewardstone-rd., u.t. 59½ yrs., g.r. 2*l.* 19s. 6d., r. 32*l.* 225
Theydon Garnon, Essex.—A rent charge of 35*l.* 16s. By MATTHEW MILES (at "Masons' Hall Tavern"). 1,000
West Smithfield Market.—"The Cock Tavern," lease for 21 yrs., r. 700*l.* 4,100
By EGERTON, BREACH, & GALSWORTHY (at Salisbury).
West Harnham, Wilts.—"The Dairy Farm," comprising 107 a. 0 r. 28 p., f. 3,600
By ALFRED RICHARDS (at Enfield).
Enfield.—Bush Hill Park, 1 to 4, Edith-cottages, f. 300
Bush Hill Park, Percival-rd., plot of land, f. 150

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; e.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; yd. for yard, &c.

PRICES CURRENT OF MATERIALS.

TIMBER.		
Greenheart, B.G.	ton	£/s/o £/s/o
Teak, E.I. ..load		12/10/0 16/10/0
Sequoia, U.S.f. cu		0/0 0/1
Ash, Canada load		2/15/0 4/0/0
Birch, do.		3/5/0 5/0/0
Elm, do.		3/10/0 4/15/0
Fir, Dantsic, &c..		2/5/0 4/5/0
Oak, do.		2/15/0 3/15/0
Canada		4/10/0 5/10/0
Pine, Canada red		0/0/0 0/0/0
Do. Yellow		2/5/0 4/5/0
Lath, Dantsic, fath		4/10/0 5/10/0
St. Petersburg..		5/0/0 6/10/0
Wainscot, Riga &c., log		2/5/0 4/10/0
Odessa, crown		2/5/0 4/10/0
Deals, Finland 2nd & 1st std		8/0/0 8/10/0
Do. 4th & 3rd		8/0/0 8/0/0
Do. Riga		6/10/0 7/10/0
St. Petersburg, 1st yellow		20/0/0 22/10/0
Do. 2nd yellow		9/0/0 20/0/0
Do. white		8/10/0 20/10/0
Swedish		8/0/0 16/0/0
White Sea		9/10/0 15/0/0
Canada, Pine 1st		21/10/0 24/0/0
Do. do. 2nd		15/0/0 17/0/0
Do. do. 3rd, &c.		7/0/0 9/10/0
Do. Spruce, 1st.		7/5/0 8/10/0
Do. do. 3rd and 2nd		7/5/0 8/10/0
New Brunswick		7/0/0 7/10/0
Battens, all kinds		5/0/0 10/0/0
Flooring boards, sq., 1 in. prep. 1st.		0/0/0 0/15/0
Do. 2nd		0/8/0 0/12/6
Other qualities		0/6/0 0/7/6
Cedar, Cuba, ft.		1/1 1/5
Honduras, &c.		1/4 1/5
Mahogany, Cuba		1/1 1/6
St. Domingo cargo av.		1/1 1/3
Mexican, do. do.		1/4 1/5
Tobasco, do. do.		1/5 1/7
Honduras, do.		1/5 1/6½
Box, Turkey ton		4/0/0 15/0/0
Rosa, Rio		7/0/0 18/0/0
Bahia		6/0/0 15/0/0
Satin, St. Doming		0/0/7 0/1/0

TIMBER *(continued)*.		
Satin, Porto Rico		0/0/7 0/1/6
Walnut, Italian		0/0/3 0/0/7
METALS.		
Iron—Pig, in Scotland	ton	2/8/1½ 2/8/10½
Bar, Welsh, in London		5/15/0 5/17/6
Do. do. at works in Wales		5/10/0 5/12/6
Do. Staffordshire, in London		5/15/0 6/10/0
COPPER—British cake and ingot		52/15/0 53/5/0
Best selected		54/0/0 54/10/0
Sheets, strong		56/10/0 57/10/0
Chili bars		49/0/6 0/0/0
YELLOW METAL	lb	0/0/5 0/0/5½
LEAD—Pig, Spanish	ton	11/13/9 11/15/0
English com. brands		11/15/ 12/0/0
Sheet, English 6 lbs. per sq. ft and upwards		12/15/0 0/0/0
Pipe		13/5/0 0/0/0
ZINC—English sheet	ton	20/10/0 0/0/0
Vieille Montagne		21/10/0 0/0/0
Spelter		18/0/0 18/2/6
TIN—Straits		58/3/0 0/0/0
Australian		60/0/0 0/0/0
English Ingots		62/10/0 63/10/0
Banca		60/10/0 61/0/0
Billiton		59/15/0 60/0/0
OILS.		
Linseed	ton	16/2/6 0/0/0
Cocoanut, Cochin		28/0/0 0/0/0
Do. Ceylon		24/0/0 0/0/0
Palm, Lagos		24/10/0 0/0/0
Rapeseed, English pale		28/10/0 0/0/0
Do. brown		27/0/0 27/10/0
Cottonseed ref.		15/17/6 16/10/0
Olein		19/0/0 20/0/0
Lubricating U.S.		0/6/3 0/7/6
Do. black		0/4/9 0/6/6
TAR—Stockholm	barrel	20/0 0/0/0
Archangel		0/12/6 0/0/0
Turpentine	ton	21/12/6 0/0/0

TENDERS.

[Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays.* N.B.—We cannot publish Tenders unless authenticated by the name and address of the sender: and we cannot publish announcements of Tenders accepted unless the amount of the Tender is given, nor any list in which the lowest Tender is under £100, unless in some exceptional cases and for special reasons.]

ALDERSHOT.—For the erection of school-buildings, board and waiting-rooms, Queen-road, West End, for the School Board. Messrs. Nash & Sop, architects, South-street, Farnham. Quantities by Mr. A. Brymer, 22, Surrey-street, Strand:—

		Extra if playground tar paved.
Botterill & Son	£8,343 13 9	£399 3 0
Jenkins & Son	8,343 0 0	307 0 0
Pond	7,995 0 0	390 0 0
Peters & Son	7,800 0 0	432 0 0
Snuggs	7,777 0 0	433 0 0
Southon	7,596 15 0	404 0 0
Martin, Wells, & Co.	7,590 0 0	360 0 0
Wallis	7,549 0 0	345 0 0
Hughes	7,452 7 10	386 5 0
Kemp, Aldershot*	7,369 0 0	342 0 0
Tompsett & Co.	7,265 0 0	150 0 0
Hughes	7,230 2 5	302 2 8
Pitt	7,227 0 0	305 0 0
Architect's estimate	7,148 0 0	308 0 0

* Accepted.

BANGOR (Wales).—For additions, &c., to workhouse, for the Union Guardians. Mr. R. Davies, architect, Bangor:—

Watkin Jones	£1,089
Hugh Edwards, 2, Victoria-street, Carnarvon (accepted)	886

BISHOPSTEIGNTON (Devon).—For rebuilding the farm buildings, "Old Walls," for the Rev. G. T. Conyns. Mr. S. Segar, architect, Union-street, Newton Abbot:—

Andrews	£450	Pook	£360
Lee	445	Fey, Bishopsteignton*	360
Parker Bros.	394	*Accepted.	

BRIDLINGTON QUAY.—Accepted for the erection of stabling, &c., Trinity-road, for Mr. J. W. Brown. Mr. J. Earnshaw, architect, Wellington-road, Bridlington Quay:—

J. Sawdon, Bridlington £170

BROMSGROVE.—For the execution of drainage works, &c., Webheath, for the Rural District Council. Messrs. T. W. Baylis & Son, engineers, 3, Park-road, Redditch. Quantities by the engineers:—

Currall & Lewis	£815 10 0	Cruwys & Hobrough	£617 3 6
Jones & Fitz-Maurice	796 16 0	W. L. Meredith	526 7 3
John Jevons	712 16 9	H. Laugher	553 10 0
C. Law	647 0 0	Stewart & Turner, Gracechurch-street.	
J. W. Lord	645 7 1	London (accepted)	514 16 9
J. McKay	641 18 7		
Saml. Turner	639 10 0		

CHISWICK.—For alterations and repairs at "George IV." public-house, Chiswick, for Messrs. Fuller, Smith, & Turner, Chiswick. Mr. J. Hume, architect, Chiswick:—

D. Heath	£199	L. Leeder & Co.	£138
J. Hunt	186	Adamson & Co.*	149
J. Fenson	181	* Accepted.	

COVENTRY.—For the erection of a cycle factory, Far Gosford-street, for Messrs. Townsend Bros. Mr. E. J. Pursell, architect, Bank Chambers, Little Park-street, Coventry:—

A. Wincott	£4,700	Haywood	£3,975
Gowing & Ingram	4,400	Gaby	3,950
R. Wooton	4,332	G. Puntham	3,964
J. Worwood	4,143	C. H. Barber, Coventry*	3,800
* Accepted.			

CRICKLEWOOD.—For the London and South-Western Bank, Cricklewood Branch. Mr. E. Gabriel, architect. Messrs. G. K. Tasker & Sons, surveyors:—

Cowley & Drake	£5,918	Oldrey	£5,513
Kellett	5,675	Godson	5,375
Carmichael	5,666	Gould & Brand*	5,220
Sheppard	5,569	* Accepted.	

CROYDON.—Accepted for building a gymnasium at Elmhurst School, Croydon. Mr. Chas. A. Monday, architect, Croydon:—

Humphreys, Ltd. £395

DARFIELD (Yorks.).—For the erection of eight houses, for Mr. G. Hoyle. Mr. J. Robinson, surveyor, Park Cottage, Wombwell:—

Excavating, Masonry, and Bricklaying.

Greensmith	£792 0	Wm. Broadbent, Wombwell (accepted)	£792 10
Wm. Johnson	857 17		

Carpentry and Joinery.

Dan Hammerton	£938 0	Jas. Taylor	£228 0
H. Taylor	299 8	C. Linford, Wombwell*	223 0
Duncan & Jones	275 0	* Accepted.	

Slating.

C. Kemp, Swinton (accepted) £79 0

Plastering.

E. Smith, Barnsley	£66 0		
McPartlain, Platts Common (accepted)	62 0		

Plumbing.

Snowden & Son, Barnsley (accepted) £14 0

Painting.

Snowden & Son	£21 0		
F. C. Wilson, Wombwell (accepted)	15 0		

For the whole of the Work.

Hammerton, Darfield £1,475 0

EAST MOLESEY.—Accepted for the execution of surface-water drainage works, Creek and four other roads, for the Urban District Council. Mr. J. Stevenson, Surveyor, Walton-road, East Molesey:—

Geo. Wilson, Walthamstow, E. £1,353

EAST MOLESEY.—Accepted for making-up Seymour-road and three other roads, for the Urban District Council. Mr. J. Stevenson, Surveyor, Walton-road, East Molesey. Quantities not supplied:—

Seymour-road.—S. Atkins, Kingston	£478 15 6
Beauchamp-road, Section No. 1.—G. Wilson, Walthamstow	257 11 0
Beauchamp-road, Section No. 2.—W. Adamson, Kingston	231 0 0
Nightingale-road.—G. Wilson, Walthamstow	447 6 4
Grove-road.—Free & Sons, Maidenhead	255 0 0

FALMOUTH.—For the erection of dispensary buildings, for the Building Committee. Mr. Edward Iago, architect, Penryn, Cornwall:—

T. Pye, Falmouth £125

GORLESTON-ON-SEA.—For the making and draining of roads, "Belle Vue Estate." Messrs. Wright & Ratcliffe, engineering surveyors, Norwich:—

W. Bracey	£1,162 13 4	F. Hipperson*	£1,047 0 0
W. Cockrill	1,119 4 6	* Accepted.	

HARWICH.—For additions, &c., to school buildings, Esplanade, for the School Board. Mr. J. Start, architect, Cups Chambers, Colchester:—

Smith & Beaumont, Harwich £282

HAWORTH (Yorks.).—For the erection of store premises, Main-street, for the Co-operative Society, Limited. Messrs. Judson & Moore, architects, York Chambers, Keighley:—

Masonry.—Sunderland & Greenwood, Haworth, near Keighley
Plumbing.—B. Lambert, Haworth, near Keighley
Joinery.—Wood & Thornton, Haworth, near Keighley
Slating.—Thos. Nelson, Manningham, near Bradford
Plastering.—B. Whitaker, Haworth, near Keighley
..... £1,856 18 6

HOYLAND NETHER.—For fence-walling and forming playgrounds, for the School Board. Mr. W. J. Sykes, architect, Hoyland Nether, near Barnsley:—

Mark A. Hague, Hoyland Common, near Barnsley £259

KEIGHLEY.—For additions, &c., to the Volunteer Drill Hall, Messrs. J. Judson & Moore, architects, York Chambers, Keighley:—

Contracting.—H. V. Robinson, Lawkholme-lane, Keighley
Joinery.—W. Steele, Apsley-street, Keighley
Slating.—T. Nelson, Manningham-lane, Bradford
Plumbing.—Parke & Lodge, Bridge-street, Keighley
Plastering.—Sawley & Kaberry, Parsonage-street, Keighley
..... £702 14 1½

KESWICK.—Accepted for the erection of a parish council and reading room, Millbeck Parish Council, for the Underskiddaw Parish Council. Mr. Wm. Hodgson, architect, Keswick:—

Building.—Wm. Cowperthwaite, Victoria-street	£122 13 7
Joinery.—John Gardiner, Main-street	59 10 0
Dressed Stone.—J. H. Bromley, Stanger-street	27 3 3
Plumbing.—J. B. Banks	14 10 0
Painting.—Thos. Brown, St. John-street	9 10 0

[All of Keswick.]

LEYTON.—For alteration and additions to the "Prince of Wales," High-road, Leyton, for Mr. H. A. Mayes. Messrs. Edward Brown & Son, architects, Commercial-street, Bishopsgate, E.C. Quantities supplied:—

Builders.

J. V. Kiddle & Son	£3,600	W. Shurmur	£3,546
E. R. Danes	3,550	S. Goodall (withdrawn)	2,913

Pewterers.

R. Davis & Son	£170 0 0	W. Rogers & Son	£130 0 0
Grimes & Son	133 0 0	Mathews & Sons	119 5 6

Gasfitters.

J. Biggs	£240	Vaughan & Brown, Ltd.	£235

LEYTON (Essex).—For the execution of private and public street works, for the Urban District Council. Mr. Wm. Dawson, C.E., Town Hall, Leyton:—

Private Street Works.

T. Adams	£3,544 5 0	R. Ballard	£3,131 18 8
G. J. Anderson	3,350 8 4	G. Wilson	3,044 5 5
W. Gibbs & Co.	3,320 14 7	W. Griffiths, Kings-land-road, N.*	2,987 13 10
J. Jackson	3,217 0 0		

[Surveyor's estimate, £3,230.]

Public Street Works.

T. Adams	£1,946 8 9	G. & F. Anderson	£1,798 9 6
J. Jackson	1,867 0 0	Gibbs & Co.	1,797 14 1
R. Ballard	1,859 4 6	W. Griffiths, Kings-land-road, N.*	1,782 19 9
G. Wilson	1,839 10 0		

[Surveyor's estimate, £1,855.]
* Accepted.

LLANELLY.—For the erection of a schoolroom, &c., for the Trustees of Bethel Chapel. Messrs. Geo. Morgan & Son, 74, King-street, Carmarthen:—

Thos. & Jno. Brown	£1,144 17 0	T. P. Jones	£1,110 0 0
David Roblin	1,141 12 6	Wm. Clement*	1,070 0 0
Wm. Hopkin & Son	1,120 0 0	* Accepted.	

[All of Llanelly.]

LONDON.—For alterations at "The Indian Queen" public-house, Chiswick, for Messrs. Fuller, Smith, & Turner, Chiswick. Mr. J. Hume, architect, Chiswick:—

Adamson & Sons	£246	L. Leeder & Co.	£153
Rousell	157	J. Hunt (accepted)	130

LONDON.—For reconstructing at Mr. A. J. Palmers' Stores, 6, Warwick-street, Pimlico. Mr. Alfred Howard, architect, 53, The Outer Temple, W.C.:—

Day	£490	L. Leeder & Co.*	£395
Tredager & Co.	415	* Accepted.	

LONDON.—For building new enclosure walls and iron fence, &c., to Chiswick-lane, Chiswick, for Messrs. Fuller, Smith, & Turner, Chiswick. Mr. J. Hume, architect, Chiswick:—

J. Hunt	£447 10	L. Leeder & Co.*	£437 0
Adamson & Sons	446 0		

For additional work on adjoining piece of land.

Adamson & Sons	£29 10	L. Leeder & Co.*	£25 10
S. Hunt	28 10	* Accepted.	

LONDON.—For pulling down and rebuilding stables, shops, and chambers at Ormond-yard, Queen's-square, W.C., for Mr. H. F. Gidden. Mr. Thomas Wilson, architect, 34, New Bridge-street, E.C.:—

John Barker & Co., Ltd.	£2,637	J. Chessum & Sons	£2,059
Robert Eddie	2,238	W. Sumner & Co., Ltd.	2,029
W. J. Coleman & Co.	2,200	Patman & Fotheringham	1,992
Clarke & Mannooch	2,107	Edwards & Medway	1,977
Edmund Toms	2,093	Charles Peak*	1,767
H. Wall & Co.	2,067	* Accepted.	

LONDON.—For taking down and rebuilding "The Golden Lion" public-house, 88, Great College-street, N.W. Messrs. Saville & Martin, architects and surveyors:—

Anley	£4,450	Toms	£4,255
Lamble	4,367	Dearing	4,170
Patman & Fotheringham	4,290	Gould & Brand*	4,168
T. E. Mitchell	4,279	*Accepted.	

LONDON.—For flats at Maitland Park-road, Haverstock-hill, N.W., for Messrs. Brinsmead & Goddard. Mr. Leonard V. Hunt, architect; Mr. G. Fleetwood, surveyor:—

Lamble	£9,763 0	Holloway	£9,110 0
Gregar	9,759 0	J. Stead	9,082 17
F. & H. F. Higgs	9,664 0	Scrivener & Co.	8,952 0
Jerrard	9,407 0	Toms	8,827 0
McCormick	9,393 0	Gould & Brand*	8,557 0
Whitehead	9,225 0	* Accepted.	

LONDON.—For alterations and additions to warehouse, Church-path, Newington Green, N., for Mr. H. Jack. Mr. E. Stone, architect, 4, Mansfield-road, Haverstock Hill, N.W.:—

Anley	£460 0	Saunders	£368 11
Wall	459 0		

LONDON.—For new flats, Maitland Park, Haverstock Hill. Mr. Leonard V. Hunt, architect. Quantities by Mr. G. Fleetwood:—

Lamble	£9,763 0	Holloway	£9,110 0
Gregar	9,759 0	J. Stead	9,082 17
F. & F. H. Higgs	9,664 0	Scrivener & Co.	8,952 0
Jerrard	9,407 0	Toms	8,827 0
McCormick	9,393 0	Gould & Brand	8,557 0
Whitehead	9,225 0		

LONDON.—For the erection of six residences, Kensington, for the Kensington Freehold Land Trust, Limited. Messrs. Booth & Fox, architects, 9, John-street, Adelphi:—

John Allen & Son	£5,765	J. Christie, Shepherd's Bush*	£2,962
C. Wilkinson & Sons	3,825	W. G. Richardson	2,750
H. Wall & Co.	3,289		
T. Wright	3,119		

* Accepted, subject to slight amendment.

LONDON.—Accepted for the erection of an infirmary, Palestine-place, Bethnal Green, for the St. Matthew Union Guardians. Messrs. Giles, Gough, & Trollope, architects, 28, Craven-street, Strand, W.C.:—

Thomas Rowbotham, Birmingham £134,000

LONDON.—For alterations to the "Priory Tavern," Belsize-road, Kilburn, for Mr. George S. Pummell. Mr. Dunn Carmichael, architect. Quantities not supplied:—

Dainton & Son	£1,221 10	J. Easterbrook & Sons (withdrawn)	£1,080 0
S. Hanson & Co.	1,129 12	* Accepted.	
C. Jones, Motcomb-street, S.W.*	1,097 0		

WEALDSTONE.—For making up Wordsworth, Shelley, and Milton-roads, and the road known as the Avenue, Wealdstone, Middlesex, for the Wealdstone Urban District Council. Mr. B. Wyand, Surveyor, Council Offices, Wealdstone:—

Name of Contractor.	Wordsworth-road.	Shelley-road.	Milton-road.	Avenue.	Totals.
	£. s. d.	£. s. d.	£. s. d.	£. s. d.	£. s. d.
Drury, H., Wealdstone*	430 16 8	587 7 5	514 14 5	210 3 3	1,743 1 9
Mann, G. R.	447 0 0	594 0 0	513 4 6	216 0 3	1,780 10 9
Wimpey & Co.	452 0 0	604 0 0	530 0 0	215 0 0	1,807 0 0
Freak, Thos.	458 0 0	605 0 0	539 0 0	230 0 0	1,843 0 0
Ballard, R., Lim.	461 1 6	611 6 2	557 17 6	219 15 5	1,850 0 7
Hall, M.	501 2 11	589 4 2	532 3 2	229 10 6	1,872 9 9
Adams, T.	535 3 0	718 2 3	600 3 10	261 18 3	2,135 7 4
Jones, W. E., & Co.	570 18 0	644 17 0	602 12 0	238 17 0	1,996 18 0

* Accepted. Surveyor's total estimate, £1,730. 14s. 9d.

LONDON.—For the erection of a wall, High-street, Plumstead for the Vestry. Mr. W. C. Gow, C.E., Vestry Hall, Maxey-road, Plumstead :—

Robert G. Hoare	£1,473 2 10	Mowlem & Co.	£1,038 0 0
Wm. J. Hart	1,373 0 0	Thomas & Edge, 8, Wilmount-street, Woolwich *	975 0 0
Edward Proctor	1,119 0 0		
Samuel Watts	1,083 13 0		

*Accepted.

LONDON.—For making-up and paving Ringmer-avenue, for the Fulham Vestry. Mr. C. Botterill, Surveyor, Town Hall, Walham Green, S.W. :—

	Road-way.	York stone.	Adamant stone.	Victoria stone.	Imperial stone.
	£	£	£. s. d.	£	£
Nowell & Robson, Kensington	955	149	99 0 0	—	—
Mears, Fulham	800	—	—	—	—
Adamant Stone Co, Old Broad-street	—	—	99 4 6	—	—
Parry, Fulham	217	150	—	—	—
Victoria Stone Co., Kingsland	—	—	—	109	—
Wimpey & Co., Hammersmith	235	147	106 0 0	—	118
Imperial Stone Co., East Greenwich	—	—	—	—	95
John Ball, Chiswick	140	—	—	—	—

NEATH (Wales).—For the execution of road works, Seven Sisters, for the Rural District Council. Mr. D. M. Davies, surveyor, 58, Water-street, Neath :—

George Harris	£1,020 18 3	C. Hannay & Son	£696 19 11
Wm. Thomas	879 1 7	Geo. Willcox	611 8 10
T. W. Davies	800 0 0	Wm. Jones	601 15 3

NEW BARNET.—For draining, paving, &c., Crescent, Clifford, and Latimer-roads, for the East Barnet Valley Urban District Council. Mr. H. York, surveyor, Station-road, New Barnet :—

Crescent-road.

Griffiths	£678 12 0	Adams	£598 0 0
Bell	620 0 0	Nicholls, Wood Green*	523 0 0

Clifford-road.

Griffiths	£1,873 19 6	Nicholls, Wood Green*	£1,343 0 0
Adams	1,499 0 0		
Bell	1,445 0 0		

Latimer-road.

Griffiths	£258 10 9	Nicholls, Wood Green*	£208 0 0
Adams	249 0 0	Bell	200 0 0

* Accepted.

NEWMARKET.—For laying 1¼ miles water-mains, for the Stewards of the Jockey Club. Mr. E. A. S. Fawcett, C.E., 1, Victoria-street, Westminster, S.W. :—

S. Kavanagh	£345 3 0	J. Porter	£225 10 0
S. Atkins	340 5 0	T. Parkington & Son, Ipswich*	214 12 0
Tabor & Hinchcliffe	255 4 3		
Selden Hipwell	219 14 5		

*Accepted.

OXENHOPE (Yorks.). — Accepted for the erection of eight houses, for the Industrial and Provident Society, Limited. Mr. J. Haggas, architect, North-street, Keighley :—

Masonry.—Waddington Bros., Oxenhope.....
Joinery.—Wm. Wright, Oxenhope £1,523 17
Slating.—Wm. Thornton, Bingden .....
Plastering.—George Holmes, Oxenhope .....
Plumbing and Glazing.—Frank Raw, Oxenhope .....

OXFORD.—For the restoration of the south nave arcade and aisle of Woodstock Church, Oxford. Mr. Geo. H. Fellowes Prynne, architect, 6, Queen Anne's Gate, Westminster, S.W. Quantities by Mr. R. Henry Hale, surveyor, 33, Old Queen-street, Westminster, S.W. :—

T. Axtell	£1,528	H. R. Franklin	£992
T. H. Kingerlee	1,147	J. J. Mitchell, Woodstock*	897

* Recommended for acceptance.

ROCHESTER.—Accepted for making and sewering a new road, Frindsbury, for the City of Rochester Land Company. Messrs. Nash & Sons, surveyors, Medway-terrace, Rochester :—

J. C. Trueman, Swanley £999

ROTHERHAM.—For the execution of sewerage works for the Rural District Council. Mr. B. Godfrey, C.E., 26, Moorgate-street, Rotherham :—

R. Snell	£998 0	C. A. Walker	£624
W. Doleman	821 0	J. Tradewell	525
J. Lister	617 0	H. Eyre	482
M. Hall	608 0	S. Taylor	440

RYE (Sussex).—For alterations, &c., to Tower House, East Cliff, for the Directors of the Rye Dormy House Club, Limited. Mr. F. Humphreys, architect, 6, Trinity-street, Hastings :—

W. Piper	£1,425 10	Ellis Bros., New Romney, Kent*	£1,157 0
J. Lester	1,313 0	A. H. White	1,126 10
P. Jenkins	1,183 0	Padgham & Hutchinson	1,126 10
J. Geary	1,166 0		

* Accepted.

WELLINGTON (Hereford).—For additions, &c., to school buildings, for the School Board. Mr. E. G. Davies, architect, St. John-street, Hereford :—

E. W. Wilkes	£457 0 0	T. Aldridge	£374 11 3
R. Morgan	385 0 0	John Watkins	350 13 0
J. Edwards	383 0 0	Chas. Cooke	325 10 0
Robert Vourys	379 0 0	W. James, Browyard*	282 12 6

[Architect's estimate, £350.]
*Accepted.

TO CORRESPONDENTS.

H. L. H.—M. A.—H. L. (Amounts should have been stated). A. T. (Below our limit). G. F. (Next week).

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

We cannot undertake to return rejected communications.

Letters or communications (beyond mere news items) which have been duplicated for other journals are NOT DESIRED.

We are compelled to decline pointing out books and giving addresses.

Any commission to a contributor to write an article is given subject to the approval of the article, when written, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and *not* to the Editor.

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Advertisements for the current week's issue are received up to THREE o'clock p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after HALF-PAST ONE p.m. on that day. Those intended for the Front Page should be in by TWELVE noon on WEDNESDAY.

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